NANDHA COLLEGE OF TECHNOLOGY

Approved by AICTE, New Delhi *Affiliated to Anna University, Chennai
Pitchandampalayam(PO), Vaikkalmedu, Erode- Perundurai Road, Erode- 638052
Website: www.nandhatech.org E-Mail: nandhatechnology@gmail.com

Academic Year 2019-20

Nandha College of Technology *Erode-638 052*

PRINCIPAL
NANDHA COLLEGE OF TECHNOLOGY
ERODE-52.

Nandha College of Technology, Erode-52

Research and Development Cell

Academic Year 2019-20

Financial Support for Faculty Members

Year	Name of teachers	Name of conference/ workshop attended for which financial support provided	Name of the professional body for which membership fee is provided	Amount of support received (in INR)
2019-20	Gowthami.J	NPTEL-Joy of computing using python	NPTEL	1000
2019-20	Sureshkumar.T	NPTEL-Problem solving through programming in C	NPTEL	1000
2019-20	Kavitha.V	NPTEL-Joy of computing using python	NPTEL	1000
2019-20	Rajavenkateswaran.C	NPTEL-Problem solving through programming in C	NPTEL	1000
2019-20	Yoga.M	NPTEL-Database management system	NPTEL	1000
2019-20	Dr.Nandha gopal.S	NPTEL-Data mining	NPTEL	1000
2019-20	Krishnakarthick.T	NPTEL-Database management system	NPTEL	1000
2019-20	Dhivyaa.C.R	NPTEL-Programming in java	NPTEL	1000
2019-20	Kiruthikadevi.K	NPTEL-Cryptography and netwrok security	NPTEL	1000
2019-20	Vidhya.R	NPTEL-Problem solving through programming in C	NPTEL	1000

Nandha College of Technology * Erode 638 052 *

PRINCIPAL
NANDHA COLLEGE OF TECHNOLOGY
ERODE-52.

Year	Name of teachers	Name of conference/ workshop attended for which financial support provided	Name of the professional body for which membership fee is provided	Amount of support received (in INR)
2019-20	Gopalakrishnan.K	NPTEL-Problem solving through programming in C	NPTEL	1000
2019-20	Sudhakar.R	NPTEL-Programming in java	NPTEL	1000
2019-20	Gopu.A.P	NPTEL-Problem solving through programming in C	NPTEL	1000
2019-20	Keerthana.N.V	NPTEL-Problem solving through programming in C	NPTEL	1000
2019-20	Kanimozhi.N	NPTEL-Joy of computing using python	NPTEL	1000
2019-20	Prabhakar.E	NPTEL-Data mining	NPTEL	1000
2019-20	Thiruvenkatasamy.S	NPTEL-Cloud computing	NPTEL	1000
2019-20	Nithya.K	NPTEL-Data science for engineers	NPTEL	1000
2019-20	Sathyamoorthy.G	NPTEL-Advanced materials and processes	NPTEL	1000
2019-20	Pitchia Krishnan.B	NPTEL-Conduction and convection heat transfer	NPTEL	1000
2019-20	Girimurugan.R	NPTEL-Material science and engineering	NPTEL	1000

Nandha College of Technology * Erode-638 052 *

PRINCIPAL
NANDHA COLLEGE OF TECHNOLOGY
ERODE-52.

R&D Coordinator

Principal

From

R.Jayanthi,

Head of the Department,

Dept. of Electronics and Communication Engineering,

Nandha College of Technology,

Erode-52.

To

The Secretary,

Nandha College of Technology,

Erode-52.

Through,

The Principal,

Nandha College of Technology,

Erode-52.

Respected Sir,

SUBJECT: Financial Assistance for MOOCs On-Line Courses-Regarding.

In connection with Massive Open Online Courses (MOOCs) of NPTEL, Online certification courses are approved for Faculty Development Programme (FDP) by AICTE. The Faculty members those who have successfully completed the above said course, would be able to produce their certificates for our Institutional promotions under Career Advancement Scheme (CAS).

In our College, Twenty One faculty members have completed the Online Course; the list is enclosed with this letter. Kindly, I request you to provide the fees paid by the faculty members as a financial support.

Thank you.

Yours truly,

(R.Jayanthi)

Nandha College of Technology * Erode-638 052 *

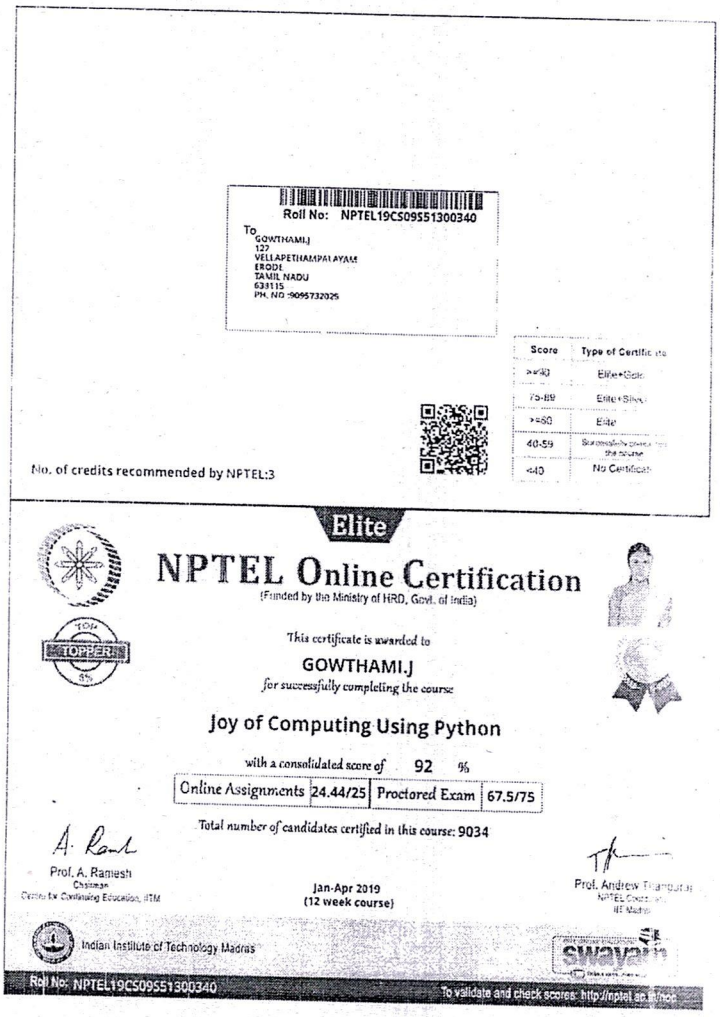
Date : 01.07.2019
Place: Erode

Enclosed:

1.Online Course Completed Faculty List

1/7/19.

PRINCIPAL
NANDHA COLLEGE OF TECHNOLOGY
ERODE-52.



Roll No: NPTEL19CS09551300340

To
GOWTHAMI.J
122
VELLAPETHAMPALAYAM
ERODE
TAMIL NADU
638115
PH. NO :9095732025

Score	Type of Certificate
>=90	Elite+Gold
75-89	Elite+Silver
>=60	Elite
40-59	Statistically cleared the course
<40	No Certificate

No. of credits recommended by NPTEL:3

Elite

NPTEL Online Certification

(Funded by the Ministry of HRD, Govt. of India)

This certificate is awarded to

GOWTHAMI.J

for successfully completing the course

Joy of Computing Using Python

with a consolidated score of 92 %

Online Assignments	24.44/25	Proctored Exam	67.5/75

Total number of candidates certified in this course: 9034

Prof. A. Ramesh
Chairman
Centre for Continuing Education, IITM

Jan-Apr 2019
(12 week course)

Prof. Andrew Thangaraj
NPTEL Coordinator
IIT Madras

Indian Institute of Technology Madras

swayam

Roll No: NPTEL19CS09551300340

To validate and check scores: http://nptel.ac.in/noc

Nandha College of Technology Erode-638052

Principal
Nandha College of Technology
Erode-52.

2

Nct It @ NCT CSE & IT TEAM
5/14/2019 at 9:53 PM

Roll No: NPTEL19CS06531300186

To,
T SURESHKUMAR
15,LTHOTTIPALAYAM,
V.VELLODE(PO)
ERODE
TAMIL NADU
638112
PH. NO :9943624558

Score	Type of Certificate
>=90	Elite+Gold
75-89	Elite+Silver
>=60	Elite
40-59	Successfully completed the course
<40	No Certificate

No. of credits recommended by NPTEL:3

Elite

NPTEL Online Certification

(Funded by the Ministry of HRD, Govt. of India)

This certificate is awarded to

T SURESHKUMAR

for successfully completing the course

Problem Solving Through Programming In C

with a consolidated score of 75 %

Online Assignments	24.69/25	Proctored Exam	50.5/75

Total number of candidates certified in this course: 9254

A. Goswami

Jan-Apr 2019
(12 week course)

Prof. Adrijit Goswami
Dean, Continuing Education & NPTEL Coordinator
IIT Kharagpur

Indian Institute of Technology Kharagpur

swayam

Roll No: NPTEL19CS06531300186

To validate and check scores: http://nptel.ac.in/noc

Principal
Nandha College of Technology
Erode-52.

Nandha College of Technology * Erode-638052 *

3

10:16 PM

https://nptel.ac.in/noc/E_Cer

Roll No: NPTEL19CS09S51300003

To,
KAVITHA V
SARALAIKATTU
THOTAM,GOUDACHIPALAYAM,VELLODE(VIA)
GOUNDACHIPALAYAM
ERODE
TAMIL NADU
638112
PH. NO :9791209971

Score	Type of Certificate
>=90	Elite+Gold
75-89	Elite+Silver
>=60	Elite
40-59	Successfully completed the course
<40	No Certificate

No. of credits recommended by NPTEL:3

Elite

NPTEL Online Certification

(Funded by the Ministry of HRD, Govt. of India)

This certificate is awarded to

KAVITHA V

for successfully completing the course

Joy of Computing Using Python

with a consolidated score of 63 %

Online Assignments	18.31/25	Proctored Exam	45/75

Total number of candidates certified in this course: 9034

Principal
Nandha College of Technology
Erode-52.

A. Ramesh

Prof. A. Ramesh
Chairman
Centre for Continuing Education, IITM

Jan-Apr 2019
(12 week course)

Nandha College of Technology Erode-638052

Prof. Andrew Thangaraj
NPTEL Coordinator
IIT Madras

Indian Institute of Technology Madras

swayam

Roll No: NPTEL19CS06S31300327

To
K.C.RAJAVENKATESSWARAN
212,URBANSOCIETY OPP
KULLAMPALAYAM(PO)
GOBI
KULLAMPALAYAM
ERODE
TAMIL NADU
638476
PH. NO :9688968313

Score	Type of Certi
>=90	Elite+Gold
75-89	Elite+Silve
>=60	Elite
40-59	Successfully con the course
<40	No Certific

credits recommended by NPTEL:3

NPTEL Online Certification

(Funded by the Ministry of HRD, Govt. of India)

This certificate is awarded to

K.C.RAJAVENKATESSWARAN

for successfully completing the course

Problem Solving Through Programming In C

with a consolidated score of 57 %

Online Assignments	24.09/25	Proctored Exam	33/75

Total number of candidates certified in this course: 9254

Jan-Apr 2019
(12 week course)

A. Goswam
Prof. Adrijit Goswa
Dean, Continuing Education & NPTEL
IIT Kharagpur

Nandha College of Technology Erode-638052

Principal
Nandha College of Technology
Erode-52.

Indian Institute of Technology Kharagpur

swayam

NPTEL19CS06S31300327

Roll No:NPTEL19CS12S31300323

To M.YOGA
2A,BOYAN THOTTAM,BHARATHI NAGAR
KALINGIYUM(PO),GOBI
ERODE
TAMIL NADU
638453
PH. NO :8610256067

No. of weeks of NPTEL Courses	Equivalence of NPTEL course with regular FDP
4	$\frac{1}{2}$ FDP of one week
8	Full FDP of one week
12	$1\frac{1}{2}$ FDP

Duration of NPTEL course: 8 Weeks

NPTEL-AICTE
Faculty Development Programme

(Funded by the Ministry of HRD, Govt. of India)

This certificate is awarded to

M.YOGA

for successfully completing the course

Data Base Management System

with a consolidated score of **63** %

Principal
Nandha College of Technology
Erode-52.

Prof. Andrew Thangaraj
NPTEL Coordinator
IIT Madras

Nandha College of Technology Erode-638052

(Feb-Apr 2019)

Prof. Dileep N. Malkhede
Advisor-I (Research, Institute & Faculty Development)
All India Council for Technical Education

Roll No: NPTEL19CS12S31300323

To validate and check scores: http://nptel.ac.in/noc

The candidate has studied the above course through MOOCs mode, has submitted online assignments and passed proctored exams.
This certificate is therefore acceptable for promotions under CAS as per AICTE notifications dated 24th July 2018, similar to other refresher / orientation courses.
F.No. AICTE / RIFD / FDP through MOOCs / 2017-18

NPTEL Online Certification

(Funded by the Ministry of HRD, Govt. of India)

This certificate is awarded to

NANDAGOPAL.S

for successfully completing the course

Data Mining

with a consolidated score of **45** %

Online Assignments	23.33/25	Proctored Exam	21.88/75

Total number of candidates certified in this course: **1345**

A. Goswami

Prof. Adrijit Goswami
Dean, Continuing Education & NPTEL Coordinator
IIT Kharagpur

Nandha College of Technology Erode-638052.

Feb-Apr 2019
(8 week course)

Principal
Nandha College of Technology
Erode-52.

Indian Institute of Technology Kharagpur

FREE ONLINE EDUCATION swayam शिक्षित भारत, उन्नत भारत

Roll No: NPTEL19CS12531300337

To
KRISHNAKAARTHIK T
220, RAMAMOORTHY NAGAR,
KARUNGAL PALAYAM
ERODE
TAMIL NADU
638003
PH. NO :9942114475

Score	Type of Certificate
>=90	Elite+Gold
75-89	Elite+Silver
>=60	Elite
40-59	Successfully completed the course
<40	No Certificate

No. of credits recommended by NPTEL:2

NPTEL Online Certification

(Funded by the Ministry of HRD, Govt. of India)

This certificate is awarded to

KRISHNAKAARTHIK T

for successfully completing the course

Data Base Management System

with a consolidated score of **50** %

Online Assignments	16.63/25	Proctored Exam	33/75

Total number of candidates certified in this course: **4749**

Principal
Nandha College of Technology
Erode-52.

Nandha College of Technology Erode-638052.

A. Goswami

Feb-Apr 2019
(8 week course)

Prof. Adrijit Goswami
Dean, Continuing Education & NPTEL Coordinator
IIT Kharagpur

Roll No: NPTEL19CS07S51300047

To
C.R.DHIVYAA
37/6 GANDHIJI STREET
SURAMPATTI
ERODE
TAMIL NADU
638009
PH. NO :9698770461

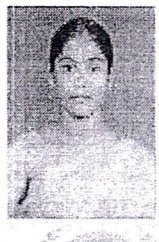
Score	Type of Certificate
>=90	Elite+Gold
75-89	Elite+Silver
>=60	Elite
40-59	Successfully completed the course
<40	No Certificate

No. of credits recommended by NPTEL:3

Elite

NPTEL Online Certification

(Funded by the Ministry of HRD, Govt. of India)



This certificate is awarded to

C.R.DHIVYAA

for successfully completing the course

Programming in Java

with a consolidated score of **94** %

Online Assignments	23.25/25	Proctored Exam	70.5/75

Total number of candidates certified in this course: **8377**

Principal
Nandha College of Technology
Erode-52.

Jan-Apr 2019
(12 week course)

Nandha College of Technology * Erode-638052 *

A. Goswami
Prof. Adrijit Goswami
Dean, Continuing Education & NPTEL Coordinat
IIT Kharagpur

Indian Institute of Technology Kharagpur

swayam

NCT
6/29/2019 at 1:32 PM

Roll No: NPTEL19CS28531300147

To
K.KIRUTHIKADEVI
ASSOCIATE PROFESSOR,
DEPARTMENT OF COMPUTER SCIENCE
ENGINEERING, NANDHA COLLEGE,
VAIKKALMEDU,
ERODE
TAMIL NADU
638052
PH. NO :9942262880

Score	Type of Certificate
>=90	Elite+Gold
75-89	Elite+Silver
>=60	Elite
40-59	Successful completion of the course
<40	No Certificate

No. of credits recommended by NPTEL:3

Elite

NPTEL Online Certification

(Funded by the Ministry of HRD, Govt. of India)

This certificate is awarded to

K.KIRUTHIKADEVI

for successfully completing the course

Cryptography and Network Security

with a consolidated score of 67 %

Online Assignments	21.56/25	Proctored Exam	45/75

Total number of candidates certified in this course: 821

Jan-Apr 2019
(12 week course)

A. Goswami
Prof. Adrijit Goswami
Dean, Continuing Education & NPTEL Coordinator
IIT Kharagpur

Indian Institute of Technology Kharagpur

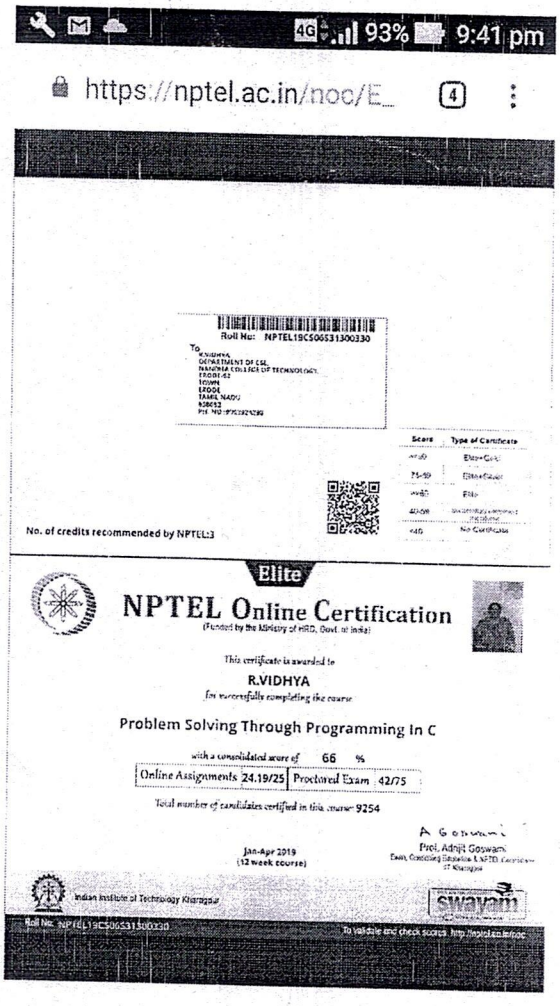
swayam

Roll No: NPTEL19CS28531300147

To validate and check scores: http://nptel.ac.in/noc

Nandha College of Technology * Erode-638052. *

Principal
Nandha College of Technology
Erode-52.



Nandha College of Technology
Erode-638052.

Principal
Nandha College of Technology
Erode-52.

Roll No: NPTEL19CS06S31300333

To,
K.GOPALAKRISHNAN
KARATHANVALASU, T.METTUPALAYAM(POST),
V.VELLODE(VIA)
ERODE
TAMIL NADU
638112
PH. NO :9952270717

Score	Type of Certificate
>=90	Elite+Gold
75-89	Elite+Silver
>=60	Elite
40-59	Statement of Participation
<40	No Certificate

No. of credits recommended by NPTEL:3

Elite

NPTEL Online Certification

(Funded by the Ministry of HRD, Govt. of India)

This certificate is awarded to

K.GOPALAKRISHNAN

for successfully completing the course

Problem Solving Through Programming In C

with a consolidated score of 61 %

Online Assignments	24.69/25	Proctored Exam	36.75/75

Total number of candidates certified in this course: 9254

Jan-Apr 2019
(12 week course)

Prof. Adrijit Goswami
Dean, Continuing Education & NPTEL Coordinator
IIT Kharagpur

Indian Institute of Technology Kharagpur

swayam

Roll No: NPTEL19CS06S31300333 To validate and check scores: http://nptel.ac.in/noc

Nandha College of Technology ★ Erode-638052. ★

Principal
Nandha College of Technology
Erode-52.

Roll No: NPTEL19CS07551300001

To
R.SUDHAKAR
37/6 GANDHIJI STREET,SURAMPATY,
ERODE
TAMIL NADU
638009
PH. NO :9944522778

Score	Type of Certificate
>=90	Elite+Gold
75-89	Elite+Silver
>=60	Elite
40-59	Successfully completed the course
<40	No Certificate

No. of credits recommended by NPTEL:3

Elite

NPTEL Online Certification

(Funded by the Ministry of HRD, Govt. of India)

This certificate is awarded to

R.SUDHAKAR

for successfully completing the course

Programming in Java

with a consolidated score of **67** %

Online Assignments	23.25/25	Proctored Exam	43.5/75

Total number of candidates certified in this course: 8377

Principal
Nandha College of Technology
Erode-52.

Jan-Apr 2019
(12 week course)

Nandha College of Technology * Erode-638052 *

A. Goswami

Prof. Adrijit Goswami
Dean, Continuing Education & NPTEL Coordinator
IIT Kharagpur

Indian Institute of Technology Kharagpur

swayam

Roll No: NPTEL19CS07551300001

Roll No: NPTEL19CS06S31300092

To
KEERTHANA N V
10/11 ROJA GARDEN SENGODAMPALAYAM
THINDAL
ERODE
TAMIL NADU
638012
PH. NO :9994180869

Score	Type of Certificate
>=90	Elite+Gold
75-89	Elite+Silver
>=60	Elite
40-59	Successful Completion
<40	No Certificate

No. of credits recommended by NPTEL:3

Elite

NPTEL Online Certification

(Funded by the Ministry of HRD, Govt. of India)

This certificate is awarded to

KEERTHANA N V

for successfully completing the course

Problem Solving Through Programming In C

with a consolidated score of 62 %

Online Assignments	24.75/25	Proctored Exam	36.75/75

Total number of candidates certified in this course: 9254

Jan-Apr 2019
(12 week course)

Prof. Adrijit Goswami
Dean, Continuing Education & NPTEL Coordinator
IIT Kharagpur

Indian Institute of Technology Kharagpur

swayam

Roll No: NPTEL19CS06S31300092 To validate and check scores: http://nptel.ac.in/noc

Nandha College of Technology
Erode-638052

Principal
Nandha College of Technology
Erode-52

Roll No: NPTEL19CS09S51300049

To
KANIMOZHI N
35,MIDDLE STREET
RN.PUDUR , ERODE
ERODE
TAMIL NADU
638005
PH. NO :9384786465

Score	Type of Certificate
>=90	Elite+Gold
75-89	Elite+Silver
>=60	Elite
40-59	Successfully completed the course
<40	No Certificate

No. of credits recommended by NPTEL:3

NPTEL Online Certification

(Funded by the Ministry of HRD, Govt. of India)

This certificate is awarded to

KANIMOZHI N

for successfully completing the course

Joy of Computing Using Python

with a consolidated score of **58** %

Online Assignments	20.53/25	Proctored Exam	37.5/75

Total number of candidates certified in this course: 9034

Principal
Nandha College of Technology
Erode-638052

Prof. A. Ramesh
Chairman
Centre for Continuing Education, IITM

Jan-Apr 2019
(12 week course)

Nandha College of Technology * Erode-638052. *

Prof. Andrew Thangara
NPTEL Coordinator
IIT Madras

Roll No: NPTEL19CS15S41300224

To
E.PRABHAKAR
72, ETTIYANKADU,
M PIDARIYUR(POST)
CHENNIMALAI
ERODE
TAMIL NADU
638051
PH. NO :8056795606

Score	Type of Certificate
>=90	Elite+Gold
75-89	Elite+Silver
>=60	Elite
40-59	Successfully completed the course
<40	No Certificate

No. of credits recommended by NPTEL:2

Elite

NPTEL Online Certification

(Funded by the Ministry of HRD, Govt. of India)

This certificate is awarded to

E.PRABHAKAR

for successfully completing the course

Data Mining

with a consolidated score of **78** %

Online Assignments	23.75/25	Proctored Exam	53.91/75

Total number of candidates certified in this course: 1345

Principal
Nandha College of Technology
Erode-52.

Feb-Apr 2019
(8 week course)

Nandha College of Technology Erode-638052

A. Goswami

Prof. Adrijit Goswami
Dean, Continuing Education & NPTEL Coordinator
IIT Kharagpur

17

Roll No: NPTEL19CS27S31300315

To
THIRUVENKATASAMY S
106 PP GARDEN, EPB NAGAR,
PERIYASEMUR(PO), SOOLAI,
ERODE
TAMIL NADU
638004
PH. NO :9843307809

Score	Type of Certificate
>=90	Elite+Gold
75-89	Elite+Silver
>=60	Elite
40-59	Successfully completed the course
<40	No Certificate

No. of credits recommended by NPTEL:2

Elite

NPTEL Online Certification

(Funded by the Ministry of HRD, Govt. of India)

This certificate is awarded to

THIRUVENKATASAMY S

for successfully completing the course

Cloud Computing

with a consolidated score of **79** %

Online Assignments	19.58/25	Proctored Exam	59.49/75

Total number of candidates certified in this course: **2303**

Nandha College of Technology * Erode-638052 *

Principal
Nandha College of Technology
Erode-52.

A. Goswami

Feb-Apr 2019
(8 week course)

Prof. Adrijit Goswami
Dean, Continuing Education & NPTEL Coordinator
IIT Kharagpur

Roll No: NPTEL19CS13511230128

To,
K.NITHYA
26B,PUMPING STATION ROAD
ERODE
TAMIL NADU
638003
PH. NO :2973989274

Score	Type of Certificate
>=90	Elite+Gold
75-89	Elite+Silver
>=60	Elite
40-59	Successfully completed the course
<40	No Certificate

No. of credits recommended by NPTEL:2

Elite

NPTEL Online Certification

(Funded by the Ministry of HRD, Govt. of India)

This certificate is awarded to

K.NITHYA

for successfully completing the course

Data Science for Engineers

with a consolidated score of 64 %

Online Assignments	20.75/25	Proctored Exam	42.75/75

Total number of candidates certified in this course: 1301

Prof. A. Ramesh
Chairman
Centre for Continuing Education, IITM

Jan-Mar 2019
(8 week course)

Prof. Andrew Thangaraj
NPTEL Coordinator
IIT Madras

Indian Institute of Technology Madras

swayam

Roll No: NPTEL19CS13511230128

To validate and check scores: http://nptel.ac.in/noc

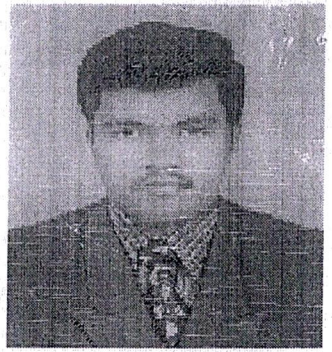
Nandha College of Technology * Erode-638052 *

Principal
Nandha College of Technology
Erode-52

Elite

NPTEL Online Certification

(Funded by the Ministry of HRD, Govt. of India)



This certificate is awarded to

GIRIMURUGAN R

for successfully completing the course

Material Science and Engineering

with a consolidated score of **60** %

Online Assignments	17.75/25	Proctored Exam	42/75

Total number of candidates certified in this course: **754**

Principal
Nandha College of Technology
Erode-52

Jan-Apr 2019
(12 week course)

A. Goswami

Prof. Adrijit Goswami
Dean, Continuing Education & NPTEL Coordinator
IIT Kharagpur

Indian Institute of Technology Kharagpur

Nandha College of Technology Erode 638052

swayam

ID: NPTEL19ME06S41300145

To validate and check scores: http://nptel.ac.in/noc

NANDHA COLLEGE OF TECHNOLOGY

Erode - 638 052.

PAYMENT VOUCHER

No. : 1

Date : 10.07.2019

Debit .....

Rupees One Thousand only

on account of Swayam Online Course

Paid to T. Gowthami AP/IT

Rs. 1000/-

Received the above sum,

Cashier

10.07.19

Signature

NANDHA COLLEGE OF TECHNOLOGY

Erode - 638 052.

PAYMENT VOUCHER

No. : 2

Date : 10.07.2019

Debit .....

Rupees One Thousand only

on account of Swayam Online Course

Paid to T. Sureshkumar ASP/IT

Rs. 1000/-

Received the above sum,

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Research and Development Cell

Academic Year 2019-20

Financial Support for Faculty Members

Year	Name of teachers	Name of conference/ workshop attended for which financial support provided	Name of the professional body for which membership fee is provided	Amount of support received (in INR)
2019-20	T.Sureshkumar	Scopus-Journal of Security in IOT Networks using BlockChain Technology	Scopus	3000
2019-20	Dr.M.Vijayakumar	Scopus-Journal of Security in IOT Networks using BlockChain Technology	Scopus	2000
2019-20	K.Nithya	Scopus-Journal of Determining the sentiments of Bi-Lingual Tweets using convolutional neural network and support vector machine	Scopus	5000
2019-20	A.P.Gopu	Scopus-Journal of A survey on secure datatransmission in wireless censor network using internet of things (IoT)	Scopus	3000
2019-20	Dr.M.Vijayakumar	Scopus-Journal of A survey on secure datatransmission in wireless censor network using internet of things (IoT)	Scopus	2000
2019-20	Murlikrishnan.K.S	Scopus-Journal of Sustainable watering solution for smart irrigation using self-aware and semantic web of things	Scopus	3000
2019-20	Dr.M.Vijayakumar	Scopus-Journal of Sustainable watering solution for smart irrigation using self-aware and semantic web of things	Scopus	2000
2019-20	V.Aravind	Scopus-Journal of Model Studies on Behaviour of Cemented Stone Columns	Scopus	1500
2019-20	P.B.Narandiran	Scopus-Journal of Model Studies on Behaviour of Cemented Stone Columns	Scopus	1500
2019-20	N.Balasubramaniam	Scopus-Journal of Model Studies on Behaviour of Cemented Stone Columns	Scopus	1000
2019-20	M.Kamalakannan	Scopus-Journal of Model Studies on Behaviour of Cemented Stone Columns	Scopus	1000
2019-20	M.Kamalakannan	Scopus-Journal of of A Comparative Study on Repairing of Binding Material Discontinuity using Cultuted Bacterial Spores	Scopus	1500

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Year	Name of teachers	Name of conference/ workshop attended for which financial support provided	Name of the professional body for which membership fee is provided	Amount of support received (in INR)
2019-20	N.Athikumaran	Scopus-Journal of A Comparative Study on Repairing of Binding Material Discontinuity using Cultuted Bacterial Spores	Scopus	1500
2019-20	V.Aravind	Scopus-Journal of A Comparative Study on Repairing of Binding Material Discontinuity using Cultuted Bacterial Spores	Scopus	1000
2019-20	P.B.Narandiran	Scopus-Journal of Comparative Study on Repairing of Binding Material Discontinuity using Cultuted Bacterial Spores	Scopus	1000
2019-20	Dr.S.Nandagopal	Scopus-Journal of Adaptive Mining of Association Rules of Inter-Tranactional Doamins	Scopus	5000
2019-20	Dr.C.R.Dhivyaa	Scopus-Journal of Performance Analysis of Convolutional Neural Network for Retinal Image Classification	Scopus	1500
2019-20	R.Sudhakar	Scopus-Journal of Performance Analysis of Convolutional Neural Network for Retinal Image Classification	Scopus	1500
2019-20	K.Nithya	Scopus-Journal of Performance Analysis of Convolutional Neural Network for Retinal Image Classification	Scopus	1000
2019-20	E.Prabhakar	Scopus-Journal of Performance Analysis of Convolutional Neural Network for Retinal Image Classification	Scopus	1000
2019-20	E.Prabhakar	Scopus-Journal of Mining Better AdvertisementTool for Government Schemes using Machine Learning	Scopus	1500
2019-20	V.S.Sureshkumar	Scopus-Journal of Mining Better AdvertisementTool for Government Schemes using Machine Learning	Scopus	1500
2019-20	Dr.S.Nandagopal	Scopus-Journal of Mining Better AdvertisementTool for Government Schemes using Machine Learning	Scopus	1000
2019-20	Dr.C.R.Dhivyaa	Scopus-Journal of Mining Better AdvertisementTool for Government Schemes using Machine Learning	Scopus	1000
2019-20	K.Gopalakrishnan	Scopus-Journal of Night Vision Patrolling Rover Navigation System for Women's Safety UsingMachnie Learning	Scopus	1500
2019-20	S.Thiruvenkatasamy	Scopus-Journal of Night Vision Patrolling Rover Navigation System for Women's Safety UsingMachnie Learning	Scopus	1500
2019-20	E.Prabhakar	Scopus-Journal of Night Vision Patrolling Rover Navigation System for Women's Safety UsingMachnie Learning	Scopus	1000
2019-20	R.Aarthi	Scopus-Journal of Night Vision Patrolling Rover Navigation System for Women's Safety UsingMachnie Learning	Scopus	1000
2019-20	R.Aarthi	Scopus-Journal of Empowered Smartgrid Systems using SDN	Scopus	1500
2019-20	D.Mohanapriya	Scopus-Journal of Empowered Smartgrid Systems using SDN	Scopus	1500

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Year	Name of teachers	Name of conference/ workshop attended for which financial support provided	Name of the professional body for which membership fee is provided	Amount of support received (in INR)
2019-20	V.Jeyageetha	Scopus-Journal of Empowered Smartgrid Systems using SDN	Scopus	1000
2019-20	S.Thiruvenkatasamy	Scopus-Journal of Empowered Smartgrid Systems using SDN	Scopus	1000
2019-20	S.Mohanapriya	Scopus-Journal of Precision Agriculture using IoT varied Sensore:A Gateway Management System	Scopus	1500
2019-20	N.Kanimozhi	Scopus-Journal of Precision Agriculture using IoT varied Sensore:A Gateway Management System	Scopus	1500
2019-20	Dr.S.Nandagopal	Scopus-Journal of Precision Agriculture using IoT varied Sensore:A Gateway Management System	Scopus	1000
2019-20	Dr.P.Saveetha	Scopus-Journal of Precision Agriculture using IoT varied Sensore:A Gateway Management System	Scopus	1000
2019-20	S.P.Kesavan	Scopus-Journal of Distributed Localized Algorithm using Hybrid Cuckoo Search with Hill Climbing (Cs-Hc) Algorithm for Internet of Things(IoT)	Scopus	2000
2019-20	K.Sivaraj	Scopus-Journal of Distributed Localized Algorithm using Hybrid Cuckoo Search with Hill Climbing (Cs-Hc) Algorithm for Internet of Things(IoT)	Scopus	2000
2019-20	A.Palanisamy	Scopus-Journal of Distributed Localized Algorithm using Hybrid Cuckoo Search with Hill Climbing (Cs-Hc) Algorithm for Internet of Things(IoT)	Scopus	1000
2019-20	V.Deepak	Scopus-Journal of Cascade Network Based Multitask Perspective Designing Agribot	Scopus	2000
2019-20	P.Narmatha	Scopus-Journal of Cascade Network Based Multitask Perspective Designing Agribot	Scopus	2000
2019-20	S.Parameswaran	Scopus-Journal of Cascade Network Based Multitask Perspective Designing Agribot	Scopus	1000
2019-20	S.Parthiban	Scopus-Journal of A New Metaheuristic Inflation Data for Real & Reactive Power Generator Restraints	Scopus	1500
2019-20	P.Karthikeyan	Scopus-Journal of A New Metaheuristic Inflation Data for Real & Reactive Power Generator Restraints	Scopus	1500
2019-20	P.Poongodi	Scopus-Journal of A New Metaheuristic Inflation Data for Real & Reactive Power Generator Restraints	Scopus	1000
2019-20	P.Balamurugan	Scopus-Journal of A New Metaheuristic Inflation Data for Real & Reactive Power Generator Restraints	Scopus	1000
2019-20	N.Prasad	Scopus-Journal of Pso Based Grid Tied PV System with Three Phase Dual Buck Inverter	Scopus	1500
2019-20	K.Muthuvel	Scopus-Journal of Pso Based Grid Tied PV System with Three Phase Dual Buck Inverter	Scopus	1500
2019-20	S.Hemasilviavinothini	Scopus-Journal of Pso Based Grid Tied PV System with Three Phase Dual Buck Inverter	Scopus	1000
2019-20	S.Parthiban	Scopus-Journal of Pso Based Grid Tied PV System with Three Phase Dual Buck Inverter	Scopus	1000

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Year	Name of teachers	Name of conference/ workshop attended for which financial support provided	Name of the professional body for which membership fee is provided	Amount of support received (in INR)
2019-20	J.Kumaresan	Scopus-Journal of Utilization of Effective Leakage Flux using Wireless Power Transmission in Induction Stove	Scopus	2000
2019-20	A.S.Thiruvenkadam	Scopus-Journal of Utilization of Effective Leakage Flux using Wireless Power Transmission in Induction Stove	Scopus	2000
2019-20	T.Krishnakarthik	Scopus-Journal of Intrusion Detection and Vulnerability Analysis with Temporal Relationalship	Scopus	1500
2019-20	K.C.Rajavenkateswaran	Scopus-Journal of Intrusion Detection and Vulnerability Analysis with Temporal Relationalship	Scopus	1500
2019-20	Dr.S.Nandagopal	Scopus-Journal of Intrusion Detection and Vulnerability Analysis with Temporal Relationalship	Scopus	1000
2019-20	Dr.P.Saveetha	Scopus-Journal of Intrusion Detection and Vulnerability Analysis with Temporal Relationalship	Scopus	1000
2019-20	Dr.P.Saveetha	Scopus-Journal of ABE Variants and Security in Data Sharing Based on CP-ABE in Cloud Computing	Scopus	1500
2019-20	K.Krithika Devi	Scopus-Journal of ABE Variants and Security in Data Sharing Based on CP-ABE in Cloud Computing	Scopus	1500
2019-20	R.Vidhya	Scopus-Journal of ABE Variants and Security in Data Sharing Based on CP-ABE in Cloud Computing	Scopus	1000
2019-20	S.Mohanapriya	Scopus-Journal of ABE Variants and Security in Data Sharing Based on CP-ABE in Cloud Computing	Scopus	1000
2019-20	M.M.Jegan	Scopus-Journal of Measurement of IC Engine Parameter to avoid the Boiling and Cheesing by Overheating	Scopus	2000
2019-20	M.Abdul Rahman	Scopus-Journal of Measurement of IC Engine Parameter to avoid the Boiling and Cheesing by Overheating	Scopus	2000
2019-20	S.Arunkumar	Scopus-Journal of Measurement of IC Engine Parameter to avoid the Boiling and Cheesing by Overheating	Scopus	1000
2019-20	Pon.Maheskumar	Scopus-Journal of Numerical Study on Performance of Single Flow Channel PEM Fuel Cell for Different Flow Channel Configuration	Scopus	2500
2019-20	S.A.Srinivasan	Scopus-Journal of Numerical Study on Performance of Single Flow Channel PEM Fuel Cell for Different Flow Channel Configuration	Scopus	1500
2019-20	M.Arjumraj	Scopus-Journal of Numerical Study on Performance of Single Flow Channel PEM Fuel Cell for Different Flow Channel Configuration	Scopus	1000
2019-20	B.Pitchia Krishnan	Scopus-Journal of Mechanical Properties and Microstructural Analysis of Similar Welded Joint of Ti-6Al-4V alloy with Filler Metal ERTI-2	Scopus	2000
2019-20	V.Vimala	Scopus-Journal of Mechanical Properties and Microstructural Analysis of Similar Welded Joint of Ti-6Al-4V alloy with Filler Metal ERTI-2	Scopus	2000

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Year	Name of teachers	Name of conference/ workshop attended for which financial support provided	Name of the professional body for which membership fee is provided	Amount of support received (in INR)
2019-20	N.Viswanathan	Scopus-Journal of Mechanical Properties and Microstructural Analysis of Similar Welded Joint of Ti-6Al-4V alloy with Filler Metal ERTI-2	Scopus	1000
2019-20	B.Pitchia Krishnan	Scopus-Journal of Experimental Investigation of Solar Drier Integrated with HSU for Crops	Scopus	3000
2019-20	M.Mathanbabu	Scopus-Journal of Experimental Investigation of Solar Drier Integrated with HSU for Crops	Scopus	2000
2019-20	T.Krishnamoorthi	Scopus-Journal of Exploration and Improving the Life of Spark Plug by Treated using Silicon Gel, Cr-Zn Oxide	Scopus	2000
2019-20	K.Anandhu	Scopus-Journal of Exploration and Improving the Life of Spark Plug by Treated using Silicon Gel, Cr-Zn Oxide	Scopus	2000
2019-20	P.Manickavasagam	Scopus-Journal of Exploration and Improving the Life of Spark Plug by Treated using Silicon Gel, Cr-Zn Oxide	Scopus	1000

R&D Coordinator

Principal

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From

Dr.G.B.Mohankumar,

Head of the Department,

Dept. of Electrical and Electronics Engineering,

Nandha College of Technology,

Erode-52.

To

The Secretary,

Nandha College of Technology,

Erode-52.

Through,

The Principal,

Nandha College of Technology,

Erode-52.

Respected Sir,

SUBJECT: Seeking Financial Assistance for Scopus/WOS/UGC Care/SCI AU Annexure Indexed Journal Publishing-Regarding.

In connection with Journal Publications (Indexed in Scopus/WOS/UGC Care/SCI/Anna University Annexure List), We are in need of financial support from our institution. Hence I request you to give the publication charges to the faculty members.

Number of Journal Papers published in 2019-2020: 24 no's.

Publication fees for 24 papers × Rs. 5000/-: Rs.1, 20,000/-

Thank You

Yours truly,

(Dr.G.B.Mohankumar) 22/06/2020.

Nandha College of Technology * Erode-638 052 *

Date: 22.06.2020

Place: Erode

Enclosed:

1. Faculty Journal Publication List.

PRINCIPAL
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ARCHIVES

Sustainable Watering Solution for Smart Irrigation Using Self-aware Sensors and Semantic Web of Things

K.S. Muralikrishnan and Dr.M. Vijayakumar

Abstract

Agriculture plays major role in economy of many countries. It depends on many factors for food production Water is the main source for agricultural activities. It needs to be automated in order to use it efficiently. The environmental factor like moisture, temperature, nutrient of soil needs to be analyzed in real-time to predict the necessity of water. It food production depends on the crop, natural climate conditions and adequate supply o irrigation. A decision support system has been proposed with measuring environmental factors using Internet o Things by contacting physical objects and integrating service module. The service module is the combination o communication module and autonomous intelligent prediction module. The communication module works with sensor network and prediction module to communicate each other. The entire system works autonomously b comparing real-time values with historical threshold values and based on event-driven architecture. The numerical validation has been received and analyzed. The result shows that the proposed system uses the wate efficiently and increases the food production.

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A Survey on Secure Data Transmission in Wireless Sensor Network Using Internet of Things (IoT)

A.P. Gopu, Assistant Professor, Department of Computer Science and Engineering, Nandha College of Technology, Erode, Tamil Nadu. E-mail: gopumecse@gmail.com

Dr.M. Vijayakumar, Professor, Department of Computer Science and Engineering, Nandha College of Technology, Erode, Tamil Nadu. E-mail: tovijayakumar@gmail.com

Abstract--- Wireless sensor network are the foremost module of IoT that gather information from the surroundings and send the data to the destination. Internet of Things (IoT) allows communicating with sensor devices in the remote area. It is growing rapidly in business since it provides most valuable service with less cost. In addition to that it makes most advancement in IT resources. A sensor plays a major role in IoT which sense the environment and transmit information to other devices. IoT is built on internet so it contains new kind of challenges like security and privacy. Here major issue which occurs is security of data transmission between nodes. Though several secure algorithms were invented for providing secure transmission each of them have some drawbacks. Traditional security algorithms works fine for wired and wireless network but when it is applied in IoT devices it consumes more energy and ultimately it becomes major problem with battery assisted IOT devices. As IoT operates in different standards and different communication stacks involved traditional encryption algorithms cannot be applied directly, it requires many modifications. This chapter provides a comprehensive discussion on security technologies for WSN using IoT. A brief discussion on the future direction of research in IoT based WSN security is also included.

Keywords--- Wireless Sensor Networks (WSNs), Internet of Things (IoT), Security, Encryption, Cryptography and Steganography.

I. Introduction

Internet of things is growing rapidly in business since it provides most valuable service with less cost. In addition to that it makes most advancement in IT resources. A sensor plays a major role in IoT which sense the environment and transmit information to other devices. IoT is built on internet so it contains new kind of challenges like security and privacy. Here major issue which occurs is security of data transmission between nodes. Though several secure algorithms were invented for providing secure transmission each of them have some drawbacks. Traditional security algorithms works fine for wired and wireless network but when it is applied in IoT devices it consumes more energy and ultimately it becomes major problem with battery assisted IOT devices. As IoT operates in different standards and different communication stacks involved traditional encryption algorithms cannot be applied directly, it requires many modifications.

Though IoT has lot of benefits it comes with new challenges for managing data. Reading by the sensor can be accessed by the mobile phone and other devices in the place like central heating / air conditioning system or the indoor light conditioning system. This application can be exploited by means of Internet of Things functionality. Things refer to everyday objects, all devices interact with user by generating and retrieving information about and from the environment.

Regarding the services for the IoT networks the current status involves several platforms that are already providing functionalities like hosting of data repositories, visualizations of data communication with the device through web interface, remote triggering of events, etc. All these platforms and their services are specifically designed and implemented for enabling the communication with IoT devices. This means that their functions are implemented using open and lightweight web protocols that allow easy and direct communication, offering the same time implementations in many programming languages and environments.

IoT has huge number of advantages. Improved efficiency, effectiveness, and new business opportunities may be achieved. Even it has lot of advantages there exist several problems in security. Because of internet as a major communication medium any one can access the data during transmission if there is no proper security mechanism are implemented. So, there exist challenging task to identify highly securable lightweight encryption algorithms. Privacy, security and confidentiality are key factors to provide a trustworthy Internet of Things.

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Security in IoT Networks Using Blockchain Technology

T. Sureshkumar, Assistant Professor, Dept of IT, Nandha College of Technology, Erode, Tamil Nadu, India.

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Dr.M. Vijayakumar, Professor, Dept of CSE, Nandha College of Technology, Erode, Tamil Nadu, India.

Email: tovijayakumar@gmail.com

Abstract--- Internet of Things (IoT) is a network of the devices that senses the data from the surroundings and communicating through the internet for the further processing. The IoT devices produce a wide variety of the data and such data may face a several number of security attacks. The development of the IoT demands a high standard of security in terms of privacy, veracity, consistency and other security features. Because of the resource and the memory restrictions, the security mechanisms used for the ordinary networks cannot be much efficient. For such reasons, instead of a centralized approach, the distributed data base system called the blockchain (BC) approach is used. This produces better results in terms of security factors such as security, privacy etc. when compared with the other security mechanisms that are in practice.

Keywords--- Internet of Things, Blockchain, Security, Privacy.

I. Introduction

In the recent years, there are tremendous technological advancements and the Internet of Things (IoT) is becoming popular [1]. IoT is a connected system of the devices which are capable to collect data from the environment and are equipped with sensors and actuators. The IoT devices are becoming popular among the human community in various forms such as smart TVs, smart speakers, toys, wearable and smart appliances. In those varieties of the applications, data may be prone to the security attack with in the device or in the data communication system which is connected over the internet. IoT can also be applied in the other fields such as the smart industries and the smart cities where the data is collected in the production location in case of the industries or the data about the weather condition, traffic and other details are collected in case of the smart cities and such data are transmitted through the internet for the purpose of some intelligence based activities. In the cases of those kinds of applications privacy is a major factor and is to provide with efficient security mechanisms to preserve the data.

The major role of the IoT based system is the sharing of data which is related with the human or the data related to the industries, transportation and other privacy sensitive data. The IoT devices are designed to be of light weight and low memory capacity and such kind of the devices are used from the smallest wearable to the huge industrial applications [2]. The Kaspersky Lab shows that IoT based applications such as smart vehicle rental terminals, self-service machines, and other smart applications have a number of security attacks [3]. The security in IoT devices used in the applications can be broken by the cybercriminals and they may access the data of the users.

As the IoT devices are small and their limited energy efficiency, most of their energy is utilized for the data transmission and the task of implementing the security and privacy mechanisms are difficult. The traditional mechanisms and the centralized security systems to make the devices smarter have failed for the IoT system because of the limited infrastructure and many of the other constraints. Thus IoT require security solutions based on the nature of the data and communication mechanisms and the security systems are to be developed to provide privacy, integrity, and data confidentiality.

II. Security in IoT Devices

The security in the IoT devices is susceptible to a variety of the security attacks due to the constraints such as the low and limited computational and memory power. It is highly significant to identify the security threats and the consequences of such threats and to design a possible security framework. The increasing growth of IoT applications results in a significant increase in the volume of the data and also it results in a high demand for the security services such as the data secrecy, reliability and authentication.

The threats identified for the IoT devices can be categorized as follows:

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ARCHIVES

Determining the Sentiments of Bi-lingual Tweets Using Convolutional Neural Network and Support Vector Machine

K. Nithya and Dr.M. Krishnamoorthi

Abstract

This paper aims at identifying the opinion of Tamiland English tweets posted in social media. It classifies the tweets as positive, negative and neutral.Social media data are increasing rapidly and these contents are mostly posted in English language as well as in Regional languages.Most of the recommendation systems omit the regional language texts and designed only foranalysing English language. A Novel deep learning approach proposes Bi-lingual text opinion identification. The dataset for this work is gathered from twitters public timeline. Features related to tweets are extracted (Tweet specific features i.e Hashtags and Emoticons) and also features from Sentiwordnet are extracted. Here, in this work, Machine learning algorithm such as Support Vector Machine (SVM) and Convolutional Neural Network (CNN) is used for identifying opinion. It is also compared with various classification techniques for identifying Tamil language tweets and English language tweetsopinion.

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Model Studies on Behaviour of Cemented Stone Columns

V. Aravind, P.B. Narandiran, N. Balasubramaniam and M.K. Kamalakkannan

Abstract

In construction sites presence of soft soils especially clays, loose and unstable soils causes a major problem because these soils poses a serious threat to the buildings in the form of collapse or distress. There are lot of methods to improve such soils among which stone column technique is adopted here. They are straight shafted columns that are filled with crushed stones and gravels. The load carrying capacity is affected by lateral bulging of stone columns which disperse the stones in soft clay. Model studies were conducted in the laboratory on stone columns of diameter 2.5cm, length ratio 8 and area ratio 22.67% and to evaluate the effectiveness of cemented stone columns over conventional stone columns.

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A Comparative Study on Repairing of Binding Material Discontinuity Using Cultured Bacterial Compounds

M.K. Kamalakkannan, N. Atthikumaran, V. Aravind and
P.B. Narandiran

Abstract--- The reality of the exploration work to define a special method of Binding Material in which included bacteria adopt Automatic-Repair of discontinuity. Modern Binding Material does commonly have few self-repairing ability which is due to more non-heated Adhesive material contents present in the binding matrix. These materials will undergo another hydration by discontinuity increases liquid resulting in made of new hydration materials which can cover or heal minor racks.. In this experiment we formed a bi-component auto-healing system which is made of bacterial spores which forms the metabolic conversion of natural spores to form calcium. This components stirred with the new Adhesive material Binding Material paste, that becomes an major part of the Binding Material. The research works shows the passing of water through freshly formed discontinuity activate present bacterial spores through diabolic activity of bacterial compounds make more amounts of calcium. The new biological -based bi-component material may shows a advanced class of Auto-healing process which can be used to binding material-based systems. The Auto-healing capacity of system is currently being qualified progress in a calculation of the raw products & durability of structure improves.

Keywords--- *Self Healing, Bacterial Binding Material, Calcium, Bacillus Subtilus, Calcium Carbonate.*

I. INTRODUCTION

Binding Material can be used as a kind of materials with the Characteristics same to that of rocks. The Binding Material as we know that is good in expansion but week in expansion. Many of the discontinuity which forms suddenly is due to tension. Discontinuity failure can form at any step of its stage cycle and almost start internally where they cannot be seen for more years until major rehabilitation revoke are needed. Destruction is caused by freeze/thaw cycles, corrosion, extreme loads, chemical attacks and other environmental conditions. Likewise, repair work to Binding Material structures is frequent and costly. Millions of amount is spent every year on construction. The production of Binding Material is an energy pensive process when mining, transportation and processing is considered. Its production level lies more than 2.35 billion metric tons per year and contributes an 10% of CO_2 emissions into the atmosphere. Here the self healing would enables the fewer repairs works or even failure of a structure through which the production level can even be decreased along with the reduced CO_2 emission.

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Review Article

ADAPTIVE MINING OF ASSOCIATION RULES OF INTER-TRANSACTIONAL DOMAINS

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ABSTRACT

Generalization of itemsets of an organization with support and confidence metrics have helped the association rule mining by describing a preorder of transactions and their origin from the ancestral transactions. Intertransactions of different backgrounds stipulate far beyond metrics to be considered for mining process. Bounding the factors which determine the frequency of transactions, in turn simplifying the generations of candidate sets is the approach CBIT [Categorized and Bounded Inter-Transaction mining algorithm] to be discussed in this paper. Differentiation of intra and intertransactions lies in the limits applied to the customer, date and time or even a maintenance of records for a specific period of time. Intertransactions are limited by a very few of its ancestral constraints as they are intended to mine association rules from transactions and incitation of successive transactions of other domains. Hence the final methodology is adept in deriving the associative level of transactions in a bounded yet large domain of itemsets. Comparisons with previous renowned strategies would best describe the efficiency of this proposed technique.

Keywords: Taxonomies, Generalization, Inter-transactions, Bounded.

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INTRODUCTION

The events of an organization are maintained periodically in the form of databases for various rationales. These events trigger the futuristic promotions that will not affect the growth and health of the organization by any means. Different methodologies have been proposed for efficient storage and manipulation of data transactions. Efficiency of an organization depends completely on the effective decisions made at the right time and locations. Every domain needs to update its activities with respect to the response of its participating customers. Many successive organizations evolve from a scratch by appropriate decisions initiated at the right instance. A sufficient example of an organization that is based completely on the priority and likability of the participating customers is a supermarket. The supermarket needs to keep track on the products most preferred over the others of same criterion and the associated purchase of products which accompanies the first product. This facilitates the supermarket to perform the services intended to enhance the profit and sustain its ranking in the society. Data mining concepts support the organization to thus retrieve patterns of likability of purchases by the customers. Many standards of data mining abridge the analysis process of transactions and produce a pattern as the outcome. This shortens human efforts in maintenance and sustainability. Explaining the supermarket context, every purchase made by a customer is defined as a transaction. The transaction includes a list of products and provisions. A supermarket cannot subject itself to specific products but promises good quality with differentiations on cost and associative compositions. There exist certain patterns among the transactions of a particular customer with time and other attributes. These patterns are described by the support and confidence values defined for each product. Support is the probability of how often the same combination of products is purchased together and Confidence is the measure of initiation of the second product's purchase by the first. The market basket analysis was framed with this context, and was applied in other domains with adequate measure of feasibility. Offers for promotion, arrangement of products on shelves, organizing the products in a right flow of preferences, variations among the same kind yet explainable and analysis of customer behavior are determined by this market analysis.

An association rule follows the representation as

$$\text{BREAD} \Longrightarrow \text{BUTTER}\ (\text{sup}=40\%,\ \text{conf}=60\%)$$

where bread and butter are individual products and the combination of both purchases has a support of 30%, 60% percent of the customers who purchase bread would go for butter as the next option. There are another kind of customers who prefer jam and bread, some with eggs and bread. The frequency of repetitions of typical purchases would motivate the organization to introduce offers, rearrange the layout of storage, maintenance of stock held and many other reasons. The association rules mining involve two major processes. Deriving a table of transactions with metrics of support and confidence of all combinations made by a single customer on the same day or period of weeks or months is the first process. The next step is to derive the association rules between different transactions. Association rules should satisfy the minimum support and minimum confidence levels in order to be a strong outcome for future analysis. These computations need level wise analysis over the recorded transactions and for deriving the support and confidence measures. Huge amount of input and output conditions have to be analyzed and stored in memory. The outcomes have to be tested for their efficiency to prove their impact over the decisions. Several taxonomies have been proposed to simplify the process of this storage and retrieval from memory, computations over the transactions and final representation as a tree after elimination of unnecessary representations (pruning). The final outcomes have to be fruitful after spending a considerable expense of resource over association rule mining. The association rule mining may tend to eliminate less frequent but significant transactions of a customer and they incur a huge force over being avoided. Determination of minimal support and confidence level terminates the difficulties of traditional approaches.

PROBLEM DESCRIPTION

The environments of the domains are not as simple to merely implement the data mining aspects to retrieve patterns. They have to be preprocessed into certain procedural representations to achieve the outcome. Moreover the domains of the same organizations were implemented with data mining aspects. There are limited factors which makes the association rule mining easier (Agrawal R, Srikant R, 1994). Notion of the transaction is in and around the activities of the unique organization and their motives. Studying and understanding the concept of functionality, boundaries are the basic terminologies to

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Performance Analysis of Convolutional Neural Network for Retinal Image Classification

Dr.C.R. Dhivyaa, R. Sudhakar, K. Nithya and E. Prabhakar

Abstract--- The performance of convolutional neural network(CNN) has been evaluated and discussed in this paper by comparing the other existing classification techniques. Most of the state-of-the-art classification techniques are trying to detect the abnormal retinal images from the color retinal images. The existing classification techniques misclassify the abnormal retinal image as normal retinal image and it will be required for the diagnosis purpose. In order to overcome the limitations of misclassification, the enhanced convolutional neural network(CNN) is proposed and analyzed to detect the affected retinal images from the color retinal images. The performance of existing classification techniques and proposed classification technique is evaluated and compared for detecting the abnormal images in color retinal images. The proposed CNN provides best result by comparing the experimental results of all the algorithms and it is suitable for detecting the abnormal images in the retinal images.

Keywords--- Retinal Images, Classification, Fuzzy Set, Diabetic Retinopathy (DR), Convolutional Neural Network (CNN).

I. INTRODUCTION

The medical images are mostly useful to identify various kinds of diseases and also helpful in finding the severity levels of diseases .In medical imaging and analysis, the retinal imaging has rapidly grown in the field of ophthalmology. It primarily focuses on automatic detection of diabetic retinopathy (DR) disease from fundus retinal images. The retinal image data is produced by imaging modalities. The main challenge of this field is how to extract the image features and classify the extracted result to identify which parts of retinal image are affected by diabetic retinopathy(DR) disease from the image classification result[18].There are three main stages of Medical Image classification include (1) preprocessing (2) feature extraction and (3) classification [11]. The first stage pre processing [19] is required to remove the noise from the input image and also to increase the reliability of an image. The feature extraction is needed to extract interest part from the retinal image for classification. The main focus of classification [17] is to map the input data become the output variables to represent one specific class(normal image or abnormal image).

Classification is a big challenge for analyzing the medical images. The main aim objective of classification is not only to reach high accuracy and also to find the infected parts of the human body by the disease [20]. The classification is needed to develop an automatic diagnosis system for better clinical care. Caner Mercan et al.[1] developed classifier to compute multi-classlocalization and the classification within whole slide images were selected to include the full range of challenging the diagnostic categories. Hind Oulhajet al.[2] proposed a novel method for characterizing the bone texture to increase the classification performance. Fengying Xieet al.[3]

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Mining Better Advertisement Tool for Government Schemes Using Machine Learning

E. Prabhakar, V.S. Suresh Kumar, Dr.S. Nandagopal and C.R. Dhivyaa

Abstract--- *Public opinion impacts most government policies and sets the limits within which policymakers must operate. It also sets the pace of reform. Central and state governments allocate massive budget for advertising schemes. Advertisement is necessary for reaching out to maximum people. But more money is invested in the advertisement. This invested amount will be reduced if governments select proper advertisement medium (Printed/Television/Social). India is diverse behavior nation. Citizens of India have different kinds of diverse educational background, culture, etc., Habitation of people in rural, urban and tribal varies considerably. The same advertisement medium is not suitable to reach out to these diverse natured set of peoples. So this paper focuses on public opinion mining to find the best advertising medium for government schemes. Data set is collected through online. Collected citizen data include gender, qualification, government school/private school, the field of work, occupation, year of experience, city/village, age, government job/private job, type of advertising medium people are comfortable. The proposed system introduces two new classification algorithms to predict the best advertisement medium to advertise government schemes. The final results show that the performance of the proposed algorithms outperformed existing algorithms.*

Keywords--- *Government Schemes, Advertisement Tool, Classification, Class Imbalance, Mean Error Based Ensemble.*

I. INTRODUCTION

The number of people using the internet for various purposes is increasing day by day. Comments on Facebook, tweets, reviews in e-commerce sites, comments/feedbacks in online blogs are filled with user opinions. If the analyst analyses this huge amount of data, then more hidden information/knowledge can be extracted. This can be used for better decision making in future. Opinion mining is one of the main branches of data mining. This mining focuses on computational techniques to extract, understand, categorize and analyze the opinions conveyed by users in online news, Facebook, Twitter and other online forums. Sentiment analysis playa a significant role in opinion mining to identify the sentiments based on given comments [9].

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Night Vision Patrolling Rover Navigation System for Women's Safety Using Machine Learning

K. Gopalakrishnan, S. Thiruvenkatasamy, E. Prabhakar and R. Aarthi

Abstract--- Women safety is the biggest threat to India. There are many areas in which women are not feeling safe. This should be changed as much soon as possible. Technology changes and improves day by day to change the way human are living. So this paper focuses on updating technology framework to make stronger women safety mechanism. In this paper, we introduce a new security mechanism to safeguard women during abnormal activities. New security mechanism has been proposed based on the patrolling robot using the Raspberry Pi. Here night vision camera can be used for securing any premises. To improve the accuracy of the classifier, various machine learning models are used. Algorithms like Boosting, Bagging, Stacking and Enhanced reweight mechanism in Ensemble are used. Confusion matrix with individual classifier accuracy is considered for evaluating results. The results show that the proposed method performs well compared to existing algorithms. .

Keywords--- Night Vision, Patrolling Rover Navigation System, Women's Safety, Machine Learning, Class Imbalance, Ensemble.

I. INTRODUCTION

The idea behind this is to provide the security to women. Any abnormal activity and small interaction of sound results in the alert to concern authority. Then robot automatically goes to the particular area and capture the image of that area and send it to the user. Raspberry Pi (small powerful CPU) connected with the camera plays an important role in making an automatic robotic system [1], [2], [11].

The system uses cameras and mic mounted on the rover vehicle for securing[19], [20] any premises. The rover vehicle moves at a particular path and is equipped with a camera and sound sensors. It uses a predefined and dynamic line and dynamically generated lines to follow its path while patrolling. Rover stops at particular points and moves to next points if the sound is detected or else the dynamic routing takes place. The system uses Infrared (IR) based path following system for patrolling assigned area. It monitors and sensors each area to detect any problem using a combination of two HD cameras. It can monitor and sensors sound on the premises.

Robot hears and analysis any sound after the area is quiet and it starts moving towards the sound on its predefined and dynamic path. Then it scans the area using its camera to detect any human faces detected. It will capture and starts transmitting the images of the situation immediately to the IoT website. Here the IoT takes for

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Empowered Smartgrid Systems Using SDN

R. Aarthi, D. Mohanapriya, V. Jeyageetha and
S. Thiruvenkatasamy

Abstract--- Software Defined Networks (SDNs) is a emerging networking paradigm that has gained a allocation of consideration in recent years especially in applying data center networks and in providing efficient security solutions. The approval of SDN and its smart safety structures gives that it can be used in the context of smart grid systems to address many of the liabilities and security problems facing such critical infrastructure systems. The impact of different cyber-attacks that can target smart grid communication network which is implemented as a software defined networks on the process of the smart grid systems. We perform different attack situations including DDoS occurrences, location high jacking and link overloading in contradiction of SDN networks of dissimilar controller types that include POX, Floodlight and RYU. Our experiments were carried out using the mini net simulator. The experiments show that SDN-empowered smart grid systems are exposed to different types of occurrences.

Keywords--- *Smartgrid, SDN, DDoS.*

I. INTRODUCTION

Electric power systems are among the most important systems in our life that enable transformation of electricity flow from transformer to buyer. However, the growing require resulted from the rising people cannot be satisfied by the conservative electric structure that has no data replace for management or monitoring. Therefore, it was essential to enhance the infrastructure, integrating information and communication technology and improving the system security [1]. In order to reach this goal, the design of smart grid has raised. Smart Grids is an improved electric grid with communication network on top of it, which permit the two-way communication between suppliers and clients and given that more control over the grid. It ensures the consistency and maintainability of the manufacture and supply of power through analyzing the gathered information that reveal the dynamics of consumer-producer behavior.

The ultimate goal of Smart Grid is to develop power resources efficiently and cheaply based on information gathered and information together. Normally a smart grid system is self-possessed factories of control center, smart houses, and reusable energy power plants nuclear power plants and cites. The major components in smart grid are communication network, control center, and power grid. In this paper work the aim of investigating the implementation of software defined networks as a announcement network restore the heritage network and its blow on smart grid securities. Now a day's network must extent to provide accommodation improved workloads with

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Distributed Localization Algorithm Using Hybrid Cuckoo Search with Hill Climbing (CS-HC) Algorithm for Internet of Things

S.P. Kesavan, K. Sivaraj, A. Palanisamy and R. Murugasamy

Abstract--- *Currently, Internet of Things (IoT) influenced applications are significant upon deployed sensors accurately. Anyhow, classical optimization problem is induced along NP-hard class of problems to determine the accurate localization of deployed sensors nodes. Thence this proposal work provides distributed localization algorithm using hybrid Cuckoo search with hill climbing (CS-HC) algorithm. In turn it improvises the mechanism of optimisation solution by validating threshold value for IoT. Computational complexity get reduced by locating deployed sensor nodes via CS-HC algorithm as well as increase lifetime of resource constrained IoT sensor nodes. Simulated results predicts that proposed CS-HC algorithm produces significant performance accurately.*

Keywords--- *Distributed Localization, Computational Complexity, Hybrid Cuckoo Search, Hill Climbing, Internet of Things.*

I. INTRODUCTION

Nowadays, IOT resolves many challenges in emerging applications like acoustic detection military surveillance, inventory tracking, and environmental monitoring. On deploying sensor nodes in IOT, scattering of nodes randomly in area are detected. It seems adhoc on lack of information. Thus prediction of node position accurately is mandatory. Wireless devices in overabundance tells that internet of things (IoT) is required for interconnected world.

Software and electronics embedding sensors and physical objects helps network communication to process in IOT [1][2]. Target tracking, routing, cities, monitoring homes, automation, health monitoring, transportation management and environment are emerging applications of IoT[3]. These tasks get efficient on successful sensor nodes deployment for surrounding monitor, entity collection and transmission accordingly with IOT applications. Sensor nodes are localized accurately for efficient IoT applications in turn segregate sensing information with no locality data from sensed data [4]. Hence, absence of locality data of sensor node are mere useless. Unlike this, sensed data influences success in geographic routing [5], intrusion detection [6], and traffic monitoring [7]. Anyhow, classical optimization problem is induced along NP-hard class of problems to determine the accurate localization of deployed sensors nodes. [8].

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Review Article

CASCADE NETWORK BASED MULTITASK PERSPECTIVE DESIGNING AGRIBOT

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ABSTRACT

IOT is an uprising technology which represents the future of computing and communications. Presently manual handling device is mostly used for cutting the grass in the agriculture area which creates pollution and loss of energy. This IOT based grass cutter will reduce work required for cutting grass in the gardens. Various sensors help to find the unwanted obstacles in the field. It consists of arduino, LCD display, motor driver and power supply circuit. LCD display is used for better receiving command from the user. A Solar grass cutter is a machine used to cut the grasses of equal length. IOT uses various sensors and devices to send the data through the internet. There is no oil and no pollution instead it operates over low noise. So farmers can operate this equipment with the help of computers or mobile. In this paper we use the cloud computing as the main backbone.

Keywords: Internet of Things (IOT), Cloud Computing, Li-Fi, Gprs, Agriculture Monitoring, Irrigation, Routing Protocol.

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INTRODUCTION

Presently, pollution plays a wide role everywhere. In case if we use gas or oil powered grass cutters due to emission of gases it causes pollution. Also now a day it is not possible to use fuels for the machine due to increasing in its cost. Additionally it requires lot of strength and energy to operate those grass cutters. So the introduction of the creatively designed robotic grass cutter makes convenient and easy grass cutting. Robotic lawn movers are powered by solar energy. The Convenient and easy grass cutter makes straightening up your lawn more pleasant. The other objective is the monitoring of the lawn while cutting. The ultrasonic sensor helps to find whether the cutter strikes any other object. Humidity and moisture sensor senses the moistureness of the grass. It uses sliding blades for cutting the grass. Rapid and fast growth of the various high tech tools makes our job comfortable. The cutting blade is flat and rigid for easy cutting. The solar panel is to be placed horizontal to the robot. We use both battery and solar power for operating the grass cutter. With help of Precision, agriculture process can easily monitor or observe of grass cutting based on collected information from a crop field. This action also called as satellite farming or site-specific crop management (SSCM).
IOT in agriculture with cloud computing is carried out to understand the recent IOT-based technical developments. The design contains the arduino, multiple sensors, solar and the battery arrangement system. Wireless sensor network in the agriculture with cloud computing, describes a hardware analysis of architecture, describes a mathematical explanation, describes a future work.

LITERATURE SURVEY

The first grass cutter was invented by Edwin budding in 1830 in England. It was designed to primarily cut the grass which grown on the sports grounds and the extensive gardens, as an alternative to the scythe, and this was appeared as british patent on august 31, 1830. The machine invented by the bedding was 19 inches and 480mm wide and has a frame made of wrought iron. These systems fully equipped with two types of sensor nodes to measure humidity, moisture and an image sensing node to compare information by taking images of grass. Parameters play an important role for taking a good decision making for healthy crop within a time. By following these practice can achieve high stability of sensors with low consumption of power. With this agriculture field monitoring period will get increase. Solar grass cutter is simple in construction. It is used to maintain the grass in the schools, gardens, colleges etc. In the earlier days the grass would be cut using cutting blades and then manual mowers were introduced, but the engine is not present there. After this a grass cutter having a motor which runs on a gasoline came into the markets which are manually operated, which causes pollution and they have more health effects. The older gasoline based grass cutter requires regular maintenance if not there would be wear and tear in the equipment and the equipment would be break down. They are also larger in size and difficult to operate and are not portable. Systematically (30 seconds) the sensors are collecting information about agriculture field and are being logged and stored online using cloud computing and Internet of Things. In this paper IOT Based grass cutting in the field and monitoring their work, to monitor crop-field this system developed by using sensors and according to the decision from a server based on sensed data the grass cutting will happen automated. By using wireless transmission the sensed data forwarded towards to web server database. If the operation is automated then that means if the moisture and temperature fields fall below of the potential range. The user can monitor and control the system remotely with the help of application which provides a web interface to the user and the agribot.
The charging of the battery using a solar panel which helps us to manually store the charge before usage and it is a renewable source of energy. Therefore it avoids the charging issue. To save the charge in the battery and also to avoid the injuries the grass cutting blades turns off when the obstacle is detected. The point to be noted how the cutter comes back to its original path of the lawn after avoiding the obstacle. This paper saves the resources as we are using the solar energy and the time is also saved by the human. To quantify humidity and water levels of soil some wireless sensors are essential. IOT-based smart agriculture system designed to perform myriad agricultural venture like weeding, spraying, moisture sensing, bird and animal scaring [12]. A GPS based robot can used for this purpose. By using this robot decision making is proposed for intelligent control and irrigation system monitoring agriculture area along with database management system [13]. To store the collected data one database management is needed and it contains all soil information. Based on the temperature sensor they mainly focused on automatically controlling the water flow

Precision Agriculture Using IOT Varied Sensors: A Gateway Management System

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Abstract--- Agriculture plays an important role in every countries. Thus, in this paper making irrigation easier and valuable, a system comprising sensors and Internet of Things (IoT) are used. The Internet of Thing approach will make easier and smarter management system and optimizing smarter agriculture in farm fields. The proposed system comprises of sensor module such as moisture sensor, water level sensor, humidity sensor, temperature sensor, rain sensors. The data's from these sensor module will be transmitted to the user through Local Range Wireless Area Network (LPWAN). The collected data's will be viewed by the user through mobile application and can be controlled manually. LPWAN uses LoRa technology which optimizes the smart agriculture and making the overall system as optimized.

Keywords--- Internet of Things, Optimized, Smart Agriculture, Sensor Module, LPWAN, LoRa.

I. Introduction

Wireless ad-hoc sensor networks uses high efficient wireless connectivity and sensor data's are transported quickly and it is reliable too [2]. For smart agriculture the wireless network has optimized advantage that any network devices can easily be communicated and the data's can be gathered, monitored and transmitted through controller module with the gateway and can be connected to any other wireless Ethernet. WAN has many applications such as healthcare, environmental monitoring, forest fire, military uses and so on. Long Range low power WAN, shortly LoRa-LPWAN is used in our project module. LoRa-LPWAN is based on spread spectrum modulation techniques that is purely a cloud based medium access control technology. Since this technology has high receiver sensitivity and low bit error rate, it has ultra-longer distance data gathering capability. The main advantage of using this technology are Long range, low power and low cost for implementing in the smart farming/agriculture field. In agriculture it is mandatory to monitor the crops. Hence, WAN is implemented to monitor and collect the data's from the crops by using sensors and gateway. The collected data's are transmitted, received and stored in the cloud/ mobile application. Below table 1 shows the advantages and disadvantages of our sensor module using wireless technology.

Table 1: A comparisons of our model with existing literature

Model	Advantages	Disadvantages
Wireless sensor networks	Reduce costs and increase productivity.	Generates large data's.
Smartphone connectivity	Recognizes the quality of agriculture ingredients.	Requires large data storage.
Framework of IoT-based agriculture	Saleable agri-products for the market.	Requires digitization of agriculture using IoT techniques.
Our module	Reduces cost, increases productivity, low power consumption.	Requires large data storage.

II. Excisting Algorithm in Smart Agriculture

In India, farming is the significant feature where most of the farmers lack proper guidance and knowledge in yielding crops at higher rate which makes even more erratic. In recent times, agriculture works are done manually in

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A New Metaheuristic Inflation Data for Real & Reactive Power Generator Restraints

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Abstract--- *To enhance the real and reactive power of the generator vary with in the certain limit and fulfills the load demand with less fuel cost, such as power balance. A divergent of the basic PSO method, is determined by incorporating chaotic sequences to enhance its consummanation. Two different example problems comprising 6 and 15 generating units are solved to demonstrate the effectiveness of the specific task. The results of CPSO are compared with GA and PSO techniques. The generation costs is lower, New method can result in great economic effect. For ELD problems, the CPSO method is more feasible and effective alternative approaches than the traditional particle swarm optimization algorithm.*

Keywords--- Economic Dispatch, Metaheuristic Methods, Chaotic PSO Algorithm, Power Generation Dispatch, Chaotic Sequences.

I. INTRODUCTION

ELD problems have complex and nonlinear characteristics with equality and inequality constraints. The purpose of ELD is to determine the optimal combination of power generations that minimizes the total generation cost while satisfying the constraints. In recent years, a lot of researches have been done and various mathematical programming optimization methods have been employed for solving ELD problems.

The prevalent mainstream techniquess bring in the rectilinear programming algorithm [1], quadratic programming algorithm [2], non-linear programming algorithm [3], dynamic programming algorithm [4,5], Lagrangian relaxation algorithm [6,7] etc. mean while individual have some defects: this should create huge blunders to use the rectilinear or linear programming algorithm to regulate the model of ED; for the boxlike programming and patchy programming algorithms, the empiric function should be looped and differentiable. This proposed method is combine both the best or good particals in the metaheuristic optimization algorithm.

Now a days most probably development of artificial intelligence technology used to solve the ELD dilemma, such as the genetic algorithm (GA) [8–10], improved GA [11], neural networks [12,13], pretended hardening and tabu search techniques [14].To find the solution for the ELD problem of units with valve point defects efficiently, a composite proposal methodology combining sequential quadratic program and partial swarm optimization techniques. This is the method has been proposed for current scenario for economic load dispatch.

CPSO approach for rectifying the ELD dilemma in an analysis of power system have been imported. In general real or practical power system operation, the current techniquess calculated the nonlinear characteristics of a

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PSO based Grid Tied PV System with Three Phase Dual Buck Inverter

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Abstract--- *Solar PV method provides a sustainable method for power production. The Solar panel has a nonlinear characteristic so that power extracting from solar panel becomes tedious especially when there is partial shading. Particle swarm optimization based Maximum Power Point Tracking is used, which tracks the maximum power from the Solar panel during partially shaded condition. Interleaved Boost converter which has minimum output voltage ripple is used. This paper proposes a method for grid interactive inverters for solar PV power generation. Three phase dual buck inverter which avoids shoot through problem is investigated. All simulations are done with MATLAB/ SIMULINK.*

Keywords--- *PSO, IBC, SPWM.*

I. INTRODUCTION

A solar panel converts only 30% of the incident solar radiations into electric power. This converted energy can be effectively used. The voltage of the solar panel is less in value and has to be boosted i.e., increased in voltage to be supplied to the grid. This boosting of volatge performed by means of a interleaved boost converter. A particle swarm optimization[1] based Maximum power point tracking algorithm using ordinary boost converter. Since the use of ordinary boost converter the system gives more ripples. A new biological swarm chasing algorithm [2] for tracking maximum power from the solar PV module. This proposed maximum power point tracking algorithm tracks power only at uniformly shaded condition and it fails to analyze the partially shaded condition. Ordinary conventional boost converter is used to track the power from the solar panel. An interleaved boost converter [3], [9] which reduces switching stress and provides minimum output ripple can be used for solar Photovoltaic power tracking since it has variable solar radiations. A Three phase dual buck inverter [4] with unified PWM which has minimum THD value was proposed with reduced switching loss and reducing the possibility of shoot through in the inverter. A Seven level inverter [7] for solar power production has been analyzed which fails to analyze partial shading in solar array. A Grid connected Solar system with a modified Maximum power point tracking [8] algorithm proposes maximum power point tracking algorithm which fails to track partially shaded condition in solar PV.

II. INTERLEAVED BOOST CONVERTER

An interleaved boost converter is dc-dc converter which is the parallel connection of two ordinary conventional boost converters with switches turned ON alternatively. The interleaved boost converter consists of two low voltage

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Utilization of Effective Leakage flux using Wireless Power Transmission in Induction Stove

J. Kumaresan, Dr.C. Saravanan, A.S. Thiruvenkadam and P. Surya

Abstract--- *This paper implements the concept of Wireless Power Transfer (WPT) between the two coils related to the induction stove. At the time of cooking, the oscillating magnetic flux in the induction stove used to cook the food. Here a thin circularly wounded flat coil kept in between the induction stove and the cookware. So, EMF gets induced in a coil based on Faraday's law of an Electro-Magnetic Induction (EMI). This Electro-Motive Force (EMF) used to charge a battery that can be used as an emergency power source or directly connected to the load. Also, the leakage flux of the induction stove is utilized by a load with the help of a flattened copper coil. This prototype also explains the WPT and gives an idea in real-time applications.*

Keywords--- *Alternating Current (AC), Electric Power Research Institute (EPRI), Electro-Magnetic Induction (EMI), Magneto Motive Force (MMF), Wireless Power Transmission (WPT).*

I. INTRODUCTION

In our India, due to the subsidy slash in Liquefied Petroleum Gas (LPG) cylinder for domestic purpose, some of the people move to induction stove for cooking purposes. In our day-to-day life, electricity plays an important role for all consumers. The demand for electricity is increased proportionally to the growth of the present population. The major drawback of the transmission and distribution system is its maintenance and various losses around 26-30% with 70-74 % efficiency. So, development is necessary for the present scenario. The flow of electrons is essential to drive electronic instruments and cooking appliances. Here the domestic level induction stove is used to implement a prototype of Wireless Power Transmission (WPT).

The working of an induction stove can be obtained from the principle behind the transformer. The coil in the induction stove and cookware is magnetically coupled as primary and secondary coils of a transformer. The current is flowing in the cooking vessel (Eddy current) due to the low resistance of the cookware; with power dissipation is given by I^2R. The opposition of the vessel is dependent on the inductive permeability (μ) and resistivity (ρ) of the cookware, just as the frequency of excitation. To produce adequate heat for cooking, the cookware must be utilized that has generally high permeability and resistivity. Also, the switching frequency of a stove is in the range of 10 kHz to 50 kHz. It is very important for the analytical analysis for the optimization and design of the heating coil of an Induction cooker. In the transformer, the problem is associated with the core is called core loss and eddy current loss. These losses will be further explained below,

1) Skin Effect Loss
2) Proximity Effect Loss

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Intrusion Detection and Vulnerability Analysis with Temporal Relationalship

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Abstract--- *The network attacks are discovered using the Intrusion Detection Systems (IDS). Anomaly, signature and compound attack detection schemes are employed to fetch malicious data traffic activities. The attack impact analysis operations are carried out to discover the malicious objects in the network. The system objects are contaminated with process injection or hijacking. The attack ramification model discovers the contaminated objects. The dependency networks are build to model the information flow over the objects in the network. The dependency network is a directed graph build to indicate the data communication over the objects. The attack ramification models are designed with intrusion root information. The attack ramifications are applied to identify the malicious objects and contaminated objects. The attack ramifications are discovered with the information flows from the attack sources. The Attack Ramification with Bayesian Network (ARBN) scheme discovers the attack impact without the knowledge of the intrusion root. The probabilistic reasoning approach is employed to analyze the object state for ramification process. The objects lifetime is divided into temporal slices to verify the object state changes. The system call traces and object slices are correlated to construct the Temporal Dependency Network (TDN). The Bayesian Network (BN) is constructed with the uncertain data communication activities extracted from the TDN. The attack impact is fetched with loopy belief propagation on the BN model. The network security system is build with attack impact analysis and recovery operations. Live traffic data analysis process is carried out with improved temporal slicing concepts. Attack Ramification and Recovery with Dynamic Bayesian Network (ARRDBN) is build to support attack impact analysis and recovery tasks. The unsupervised attack handling mechanism automatically discovers the feasible solution for the associated attacks.*

Keywords--- *Intrusion Detection, Attack Ramification, Vulnerability Analysis, Temporal Dependency Network and Dynamic Bayesian Network.*

I. INTRODUCTION

Network forensics is the extended phase of network security as the data for forensic analysis are collected from security products like firewalls and intrusion detection systems. The results of this data analysis are utilized for investigating the attacks. There may be certain crimes breach network security policies but may be legally prosecutable. These crimes can be handled only by network forensics. Network forensics can be used to analyze how the attack occurred, who was involved in that attack, duration of the exploit and the methodology used in the

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ABE Variants and Security in Data Sharing based on CP-ABE in Cloud Computing

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Abstract--- Variety of the large amount and the velocity of the data refer to Big data. Cloud computing is the best approach to store such large volume of data than traditional databases. Maintaining the privacy and access control of big data is the major issue to be considered, in order to avoid the unauthorized user access. Introducing Ciphertext Policy-Attribute Based Encryption (CP-ABE) scheme achieves effective access control of cloud data with less computation overhead in encryption and minimizing pairing operations for less decryption time by having number of attributes in each policy. CP-ABE to be widely used in popular smart terminals that can run social software. Furthermore, existing algorithms for restoring images also have room for improvement in terms of time and space requirements. For this reason, we propose a progressive image restoration strategy based on the improved CP-ABE in this paper. For the improvement of CP-ABE, we design a new encryption scheme to achieve a shorter constant-size ciphertext, construct an auxiliary function to help the independent authority centers generate private keys for users in new ways, design a decryption algorithm with only one bilinear pairing calculation, and provide the update algorithms for attribute revocation. Subsequently, we build a distributed CP-ABE based on our improved CP-ABE, and the correctness and security of the proposed CP-ABE algorithm are also proven.

Keywords--- Attribute-Based Encryption (ABE), Privacy-preserving, Ciphertext-Policy ABE (CP-ABE), Constant Cipher Text Length, Broadcast Encryption.

I. Introduction

Security is the major issue in cloud computing usually only one encryption algorithm is used. But using one encryption algorithm is not much efficient. According to author et.al Zinah Raad Saeed in order to provide high level of security, three level encryption is done. Rivest–Shamir–Adleman (RSA), Advanced Encryption Standard (AES), Elliptical Curve Cryptography (ECC) are used to improve the security in cloud computing. The text data is used for encryption. At first data is encrypted by AES algorithm and then Key of AES is encrypted by ECC again the encryption is done with RSA algorithm. The combination of these algorithms will provide Confidentiality, Integrity, and Authenticity (CIA).

The review of this study deals with some security features Privacy, Authenticity, Integrity, Key Management. These features helps to increase the benefits of AES, RSA, ECC and to improve the security level in large data storage.

In Encryption,

1. Only text data is taken as input
2. For encryption first AES is used for securing the text data (D0).
3. Secret Key for encrypting the data is (S1)
4. S1 and key of ECC is allowed is done with RSA.
5. At the end of encryption (Ft) is given along with encoded key.

In Decryption,

1. Decode the encrypted data is shown.
2. In decryption side the data is decrypted with RSA.
3. Final encrypted text data and encoded key is applied using RSA.
4. Decrypt with ECC algorithm and D0.

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Measurements of IC Engine Parameters to Avoid the Boiling and Cheesing by Overheating

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Abstract--- During the time of producing power in IC engine the temperature increases rapidly, the main causes of overheating is the failure of cooling system, leaks in the cooling system hoses, bad radiator and several other reasons causing the overheating in the automobile sector. The overheating leads to the damage in the cylinder, the moving parts inside the engine are damaged. It leads to the damaging of the cooling system and continuously driving the vehicle in the overheating state, it leads to the cheesing of the engine. To overcome the problem, we introduced a setup which alerts the driving persons by buzzer sound, when the engine temperature reaches above the operating limit, the engine will run-off. The product setup is works by the help of ARDUINO UNO circuit, the codes are inserted in the board and the thermistor is used to monitor the temperature of the engine.

Keywords--- Cooling System, Overheating, ARDUINO UNO and Thermistor.

I. Introduction

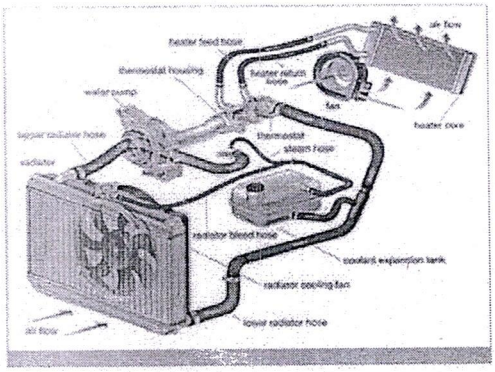

Figure 1.1: Water Cooling System

In the case of Internal combustion engines combustion of fuel and air takes place inside the cylinder of the engine and hot gases are generated. The temperature of the gases generated will around 2300-2500°C. This is a very high temperature because of which the oil film between the moving parts will burn and may result into seizing.

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Numerical Study on Performance of Single Flow Channel PEM Fuel Cell for Different Flow Channel Configurations

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Abstract--- The performance of the Proton Exchange Membrane Fuel Cell (PEMFC) is considerably influenced by the different parameters like, geometrical, environmental and flow parameters. The uniform distribution of the reactant gases over the active area are carried out by the flow channels in the PEM fuel cell. In this numerical analysis, the PEM fuel cell single flow channel configuration with different channel size (0.5 mm× 0.5 mm, 1 mm ×1 mm, 1.5 mm × 1.5 mm, 2.0 mm × 2.0 mm) is analyzed for various cell potentials to evaluate the various performance parameters like, anode hydrogen concentration, cathode water concentration, cathode oxygen concentration, membrane current density, Pressure and velocity of flow gases at gas diffusion layer. The entire comprehensive three dimensional models of the four different channel sizes of PEM fuel cell single flow channel configuration with the similar size of rib and channel length were designed and analyzed by means of a standard modeling and analysis software. From this numerical analysis, different performance parameters of the PEM fuel cell with four different flow channels were measured and the obtained results were compared with each other.

Keywords--- Numerical Analysis, PEMFC, Single Flow Channel, Channel Configuration, Performance Measures.

I. Introduction

Recent years the abundant researches are turn into the fuel cell technologies due to their greater efficiency, smaller emissions and also running down of fossil fuels availability. Its maximum efficiency that can be reach as 60% in the conversion of electrical energy and the overall efficiency of 80% in the combination of thermal and electrical energies more than the 90% of cutback in foremost environmental pollutants [1].It is more essential to maintain the adequate pressure for the proper water balance inside the shallow flow channels [2].The management of water balance is one of the critical tasks which is affects the performance of the entire fuel cell assembly during the operational periods among the other design and operating parameters[3, 4]. The management of water balance should be attentively considered. The conductivity of ions will be decreased automatically, if the electrolyte membrane cell is excessively dried out, Gas diffusion layer unfavorably changes the routine expected output of the PEM fuel cell, if the cells of the membrane electrolyte is excessively drenched, over potential will be found due to the flooding of the porous [5].The many research and developmental activities are focused and accelerated towards the establishment of superior PEMFC to produce the higher current densities and most encouraging operational periods of the cell [6].The irregular distribution of reactant gases in a PEM fuel cell arrangement is taken as a critical issue also it leads to the irregular current density, membrane include of hot spots , deficiency in performance and material dilapidation [7].Other researchers [8, 9] have focused their numerical studies to evaluate the influence of the flow field geometry on the pressure drop variation and flow distribution in a PEM stack. They concluded that both the channel resistance and the rip widths (space between channels) can enhance the uniformity of the flow distribution. However larger rip width may constitute a better solution for flow distribution because increasing the channel resistance requires an excessive pressure drop which is not beneficial in practical applications. Geometrical dimensions and shape of the flow channels, end plates in flow field are modified and optimized in a single pass serpentine flow channels design. Among the other flow channels design, hemispherical and triangular shaped cross section produced the excess 9% consumption of hydrogen at anode side, as a result any modification in flow channel design enhance the performance of the PEM fuel cell [10].Management of water inside the flow field is addressed as

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Mechanical Properties and Microstructural Analysis of Similar Welded Joint of Ti-6Al-4V Alloy with Filler Metal ERTi-2

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Abstract--- Tungsten Inert Gas (TIG) welding was performed on Ti-6Al-4V using pure titanium Grade-2 wire as filler material. The important welding parameter that is welding current was varied and other two parameters were maintained at a constant value. About 100 and 110 amps with 40 volt of welding current with welding speed of 0.5 mm/s was maintained. The optical microscopy carried out on the samples exhibits the occurrence of $\alpha + \beta$ phases in the base metals and needle like structure in the weld metal. The mechanical properties of the welded samples were established by conducting Rockwell hardness assessment and tensile test. The samples were processed and that produces maximum yield strength of 340 Mpa and ultimate tensile strength of 386 Mpa respectively. In the welded area, the hardness value of RC 45 was located. During welding and solidification process, the hardness range raises up and that indicates the absorption of oxygen.

Keywords--- TIG Welding, Microstructure, Rockwell Hardness and Tensile Strength.

I. Introduction

In recent days titanium alloys are used successfully in many industrial fields because of their attractive properties such as high strength-to-weight ratio, low density, corrosion resistance and excellent weldability and good high temperature properties. Titanium alloys are used in the aircraft and aerospace industry, chemical industry, medicine, marine, automotive industry and the biomedical industry as reported by Esmaily et al [6]. These alloys can be machined by traditional machining techniques and highest degree of finish can be obtained. Further, titanium alloys have good compatibility to human tissues therefore: these alloys are used as dental implants and bone implants. Pure titanium and titanium alloys absorbs oxygen and forms titanium oxide during welding. Titanium can be welded with processes such as TIG welding, laser beam welding, laser hybrid welding, electron beam welding (EBW) and friction welding. TIG welding is more economical and prevents absorption of hydrogen and oxygen during welding of titanium alloy. TIG welding was carried out in the welding parts that are made with titanium alloys as reported by Baeslack et al [11]. Yunlian[12] reported among various welding processes laser beam welding (LBW) produced the confined weld bead, minimum distortion and thin grains than any other welding process. In the present work TIG welding is performed for making joints between similar grade of Ti-6Al-4V and mechanical properties and metallurgical characteristics of the joint regions are studied.

II. Experimental Work

2.1 Experimental Procedure

The Ti-6Al-4V alloy is cut to the desired size of 50 mm × 50 mm × 6 mm and the edges were chamfered for 3mm. The mixture of the base metal is presented in Table 1. The filler metal was AFM ERTi-2 (Grade 2) pure titanium. The tensile strength of the filler metal is only 345 MPa which is well below the strength of the base metals. The base metal tensile strength is 950 MPa. In the present study matching electrode was not available readily therefore, Grade-2 is used as filler metal. TIG welding process was performed by varying the current value. About 100 and 110 amps of current values were used with the welding voltage and speed of 40 v and 0.55mm/s respectively.

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Experimental Investigation of Solar Drier Integrated With HSU for Crops

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Abstract--- This work involves the experimental investigation of solar drier integrated with HSU for crops. The loading capacity of the unit is 1kg and radish is used as a crop. In HSU, PCM (Paraffin Wax) is acted as the heat storage medium. The experiments were conducted with the radish having the initial moisture content of 95% wet basis from to be removed 10% during November 2016 in Salem, Tamil Nadu. The nominal surface area of all types of absorber plate is 0.5 m2 but effective surface area varies with configuration. The drying time and efficiency were taken around 15.6 hours and 2.6-12.13% respectively with the flat plate but it varies up to 10-13 hours and 4.2-16.4% respectively for other design considerations. Also, the quality of the dried radish will be high superior compared to open sun drying.

Keywords--- Double Pass, Natural Convection, HSU.

I. Introduction

Now days, Solar drying technology are mostly used instead of fossil fuels for product drying. Because it produces less amount of pollution and it prevents from insects. It can be used for reducing carbon particles emission in the atmosphere. Sun drying is traditional methods for reducing the moisture content by spreading the grains under the sun. Traditional sun drying takes place by storing food items and also open sun drying degradation of ingredients such like that minerals and vitamins etc. This method is most economical to the farmers. Many researches have been made to rectify the problem of scattered drying in solar drying. According to literature review, Drier system with heat energy storage is classified into two types. First one solar drying system which is based on sensible heat storage method and another one is based on latent heat storage system. Gulsah Cakmak et al [14]. investigated a solar drier by PCM solar integrated collector in this research; theyfound that solar drier proposed system which is suitable for drying vegetables and fruits by adding quality of food values. E. Kavak Akpinar [9] investigated thin layer drier characteristics of mint leaves with help of solar drier under the open sun condition. In this analysis, He found that energy utilization ratio value and also improvement potential of the cabinet will be decreased by increasing the ambient temperature while the cabinet exergetic efficiency will be increased by increasing the ambient temperature. Sakamon Devahastin et al [15]. investigated on the latent heat storage to conserve the energy during the drying and also investigated on its effect of drying kinetics of food products. In this investigation, they found that the charge time decreased by increasing the inlet air velocity and inlet air temperature. Aymen El Khadraoui et al [6]. have designed and constructed the forced convection type of solar drier by using PCM Material. In this research, they found that drying chamber temperature is higher than the ambient temperature after using solar energy accumulator. Esakkimuthu et al [3]. investigated PCM Material in thermal storage system for application of solar air heating. They have concluded that the collector efficiency will be higher at high mass flow rate. Ahmet Koca et al [19]. designed and constructed with PCM material to analysis the latent heat storage system. They observed that exergy efficiency lower that net energy efficiency and also this research is shown that the exergy efficiency of latent heat storage system are very low while using PCM material in this system.

Adnaue Labed et al [20]. designed and constructed the solar drier to avoid Henna leaves mixture with the ground to keep safely dried sample from insects and scorpions. Alejandro Reyes et al [22]. proposed dehydration of mushrooms in solar drier by PCM material. They have concluded that rehydrated mushrooms hardness value will be more than the fresh mushrooms hardness value and also by adding the paraffin wax mass, thermal efficiency will be increased in the accumulator. S.M. Shalaby et al [2]. Have experimentally investigated indirect solar drier by using

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Exploration and Improving the Life of Spark Plug by Treated Using Silicon Gel, Cr-Zn Oxide

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Abstract--- Spark plug is one of the important device in SI engine. Standard spark plugs often have troubles firing, which can decrease the speed and reliability of a engine. For enhance the engine performance here we investigated the spark plug ground electrode as well as centre electrode by treated with silicone gel and Cr-Zn oxide for improving the life of spark plug and performance. This reduces the emissions from the engine while also increasing fuel efficiency. Also reduced carbon deposits inside the engine cylinder. This paper evaluated about the silicone gel, Zn & Cr, oxide Coating on the spark plug.

Keywords--- Spark Plug, Silicon Cr-Zn Oxide, Knoop Hardness Test, Carbon Deposition Test.

I. Introduction

A spark plug is a device which is commonly using SI engine to produce a spark to ignite charge in a petrol engine. Spark plug body is made up of Ceramic material. The Porcelain insulator part is used to avoid current flow from the centre electrode to the housing of spark plug. The grooved outer shape increase the gradual path from the terminal to the housing. The centre electrode is typically manufactured from iridium or nickel based alloy as this can resist the high temperatures formed by the ignition spark and combustion. The centre electrode forms the positive part of the circuit. The centre electrode usually has a copper core to carry electrical current and improve the thermal efficiency. The tips of the side and center electrodes are about 0.02 - 0.08 inch (depending on the type of engine), apart from each other creating the gap for the spark to jump across.

II. Literature Survey

Wallters, Simon, Howson, P.A. and Howlett, R.J. (2007) Future Spark plug design and making method have remained largely unchanged since their invention. Spark plug production is a difficult process and there are many options for faults to be manifested. During the most of the past of spark plugs, a creative yet relatively simple "go/no go" batch test has been the tested of choice, as it is rapid and well-proven for a variety of the most generalfaults. However, in recent years, main disadvantages with these test have come to light. This paper investigate the existing spark plug testing tools and techniques, discovered during a comprehensive literature review. The largest production spark plug testing system is investigated, with a view to devising a more higher method of spark plug testing. The work conclude that there is a need for a new production spark plug testing, ideally offering. Further increased the reliability and fault finding, for future spark plug will improve the performance and efficiency of the engine.

III. Problem Identification

The carbon deposits in the ground electrode may reduce the life of spark plug and also the overheat cause pre-ignition that may lead to melting of centre electrodes of the spark plug. It is also leads to engine starting problem and mis-firing during engine running.

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