About the College :

New Horizon College of Engineering is an Autonomous college affiliated to Visvesvaraya Technological University (VTU), approved by the All India Council for Technical education(AICTE) & University Grants Commission (UGC). It is accredited by NAAC with 'A' grade. The departments of Computer Science, Electronics & Communication, Mechanical, Civil and Biotechnology have been accredited by the National Board of Accreditation (NBA). It is an ISO 9001:2008 certified Institution. New Horizon college of Engineering is located in the heart of the IT capital of India, Bangalore. The college campus is situated in the IT corridor of Bangalore surrounded by MNCs and IT giants such as Intel, Accenture, Cape Gemini, ARM, Symphony, Wipro, Nokia, JP Morgan and Cisco to name a few. NHCE has a scenic and serene campus that provides an environment which is conducive for personal and intellectual growth. The infrastructure acts as a facilitator for the effective delivery of the curriculum. NHCE boasts of state – of - the - art facilities for its students. They are given utmost encouragement in their areas of interest by providing hi-tech facilities backed by faculty support. The institute places highest priority on innovative programs of instructions that include both traditional class room theory and professional skills training. There is a strong impetus on overall personality development of the students with emphasis on soft skills. Students are supported through mentoring and counseling systems. The management offers scholarships to meritorious students. At NHCE, we understand and respect our role as educators and from the moment a student walk into the campus, he/she is well guided to know his/her strengths and choose an area of functional specialization. This enables students to concentrate their efforts and energies to gain the competitive edge.

About the Departments of CSE & ISE:

Computer, Information science and Engineering fields focuses on current Information Technology trends, and Domain Specific Applications. The courses facilitates the evolution of skills in students to help them attain a higher degree of knowledge, global competency and excellence, for the betterment of the society. Departments of CSE & ISE at NHCE offers graduate, postgraduate and PhD programs. The four year B.E degree equip the students to meet day-to-day Technological advancements of the ever dynamic CS, IT fields through adept training on various subjects of curriculum of Information Science and Computer Science, engineering and beyond. Departments offers B.E program through autonomous scheme from the year 2015. The two year autonomous M.Tech Computer Science Engineering & Software Engineering programmes ensures a good standard and solid knowledge in designing, creating and maintaining the software. Departments has very good team of highly qualified and talented faculty members including Professors, Associate Professors and Assistant Professors.

Centre of Excellence/MoU`s/R&D

Departments are having MOU`s with reputed organisation like SAP labs, Adobe, H.P.E, VMware with their centres of excellence in the campus. Departments are also a members of professional societies like C.S.I, I.S.T.E, IE(I), IACSIT, IETE, etc.

Objectives of the FDP :

- To provide a platform to stakeholders to meet and share the ideas, views and new findings in theme of fostering innovation and excellence in Research Frontiers especially in Advanced Networking, Cloud Computing, Data Analytics and IOT. The FDP covers the pedagogical design aspects of Networking, Security and IOT, as well as courses supported by engineering technologies.
- To provide a space for faculty to meet, discuss and learn with experts in the related fields.
- To strengthen the relationship with industries, academic institutions and research institutions
- To provide a unique forum to exchange ideas, present the observations, models, results and experiences with the researchers who are involved in real time projects that provide solutions for research problems of recent advancements in Cloud computing, IOT, Computer Networks and Data Analytics.
- To be a high quality dissemination forum for new ideas, technology focus, research results and discussions on the evaluation of computing for the benefit of both scientific and industrial developments.

About the FDP - Relevance: Major Topics and Tools are going to be covered: National FDP on Research Frontiers in Advanced Networking, Security and IOT – A Tool Driven Approach) –

Internet of Things (IoT): An elaboration to the topic will be delivered then after an in-depth discussion on end-to-end architecture of IOT, edge nodes and data acquisition networking of field gateway and cloud, data analysis at cloud and future of IOT.

Core Networking: The Topic will throw light on experimental learning of HTTP and experimental learning of Application Layer load balancing.

Network Security: The Topic will give a broad picture of areas ranging from fundamental to advanced concepts, with a research perspective of challenges in Network Security with tools and highlight the issues relating to the main-in-the-Middle (MITM) attack.

Tools: WGET & CURL NC(NETCAT), APACHE WEB SERVER, SSLCSTRIP, Wireshark(or tcpdump), SSH, DSNIEF(for ARP and DNS spoofing)

Network Management: Application of Software Defined Network for Network management and security using the state-of-the-art technology and tools.

Tools: Network Simulation- NS-3 with Phython Scripting.

Guest Speakers: Industry experts with competency/Domain expert having 10+ years experience/ Professors/Emeritus Professors/ Research Scientists working in the domain for not less than 15+ years from IITs/NITs/IISc/MNCs and invited speakers from DRDO/CSIR/ Professional Bodies.

Address for Communication

Dr. S.MOHAN KUMAR,

Co-ordinator & Organizing Secretary

New Horizon College of Engineering, Bengaluru.

Email: mohanks@newhorizonindia.edu /coordinator.tfdp2017@gmail.com

Phone No: 9686308745

Advisory Committee

Padmashri Prof. R.M. Vasagam
Chairman – National Advisory Committee

Dr. H.N. Jagannatha Reddy
Registrar, VTU, Belagavi

Dr. N. Mohandas
Former Registrar, Indian Institute of Science, Bengaluru and Advisor (Technical), MHRD, Govt of India

Shri . O.P. Khanna
Chairman, Manipal Heart Foundation

Dr. D.N. Reddy
Director - Engineering Staff College of India and Former Chairman, Recruitment & Assessment Centre, DRDO, Ministry of Defence, Government of India

Prof. S. Sancheti
President, Manipal University, Jaipur

Dr. Wooday P. Krishna
Indian Institution of Production Engineers (IIPE) and Past Chairman, IEI-KSC, Bengaluru

Dr. L.V. Muralikrishna Reddy
Chairman – Organising Committee – ITC 2017

Dr. K. Ramachandra
Former Director, GTRE, Bangalore & Director, NDRF

Dr. Kumanan T.
Principal, Faculty of Engineering, Meenakshi University, Chenai

Dr. E. Ranga Reddy
CEO & Founder, ENTI Innovations Pvt. Ltd, Bangaluru

Dr. Manjunatha
Principal, NHCE, Bangalore

Dr. Girija N Srinivasalu
Director, New Horizon Quality Assessment & Skill Development Center, NHEI

Dr. Prashanth C.S.R
Dean-Academics, NHCE, Bangalore

Dr. M.S. Ganesha Prasad
Dean - Students Affairs & Head of Department - ME, NHCE, Bangalore

Dr. K. Gopalakrishnan
Dean (R&D), NHCE, Bangalore

FDP Highlights:

- Course Material: A Softcopy of the presentation will be provided to all the delegates along with the certificate of Participation.
- International and National Eminent Academicians, Industrialists and Scientists are going to be Advisory Board members and give keynote address and also will chair the sessions.
- The FDP will include workshops, special sessions and tutorials, along with prominent keynote speakers and regular paper presentations in a parallel track.
- Special Sessions on File and storage technologies, IOT and its applications, Data Science and also Big Data Analytics will be facilitated to the delegates to connect more on our FDP theme.

REGISTRATION FORM

AICTE- Sponsored Two-Week National Level Technical

Faculty Development Programme on

"Research Frontiers in Advanced Networking, Security and Internet of Things-A Tool Driven Approach"

11th to 23rd December, 2017

Name:_____

Gender: Male/ Female DOB:_____

Academic Qualification:_____

Designation:_____

Name of the Institution:_____

Approved by AICTE: Yes ☐ No ☐

Communication Address with PIN code:

_____

_____

_____

Mobile:_____

Email:_____

Do you need accommodation? Yes ☐ No ☐

DD NO. _____ Date:_____

Bank:_____

Place:_____ Date:_____

The above mentioned information is true to the best of my knowledge and belief I agree to abide by the rules and regulations governing the AICTE-FDP Programme. I shall attend the Programme for the entire duration.

Applicant's Signature

SPONSORSHIP CERTIFICATE

Certified that we sponsor Prof. / Dr. / Mr. / Ms.

_____

for attending Two Week FDP to be held at NHCE from December 11th to 23rd, 2017

Date & Seal

Signature of the Principal/Director

Chief Patrons

Dr Mohan Manghnani
Chairman, NHEI

Mrs. Renuka Manghnani,
Executive Director & Chairperson-Governing Council, NHEI

Patron & Programme Chair

Dr. Manjunatha
Principal, NHCE

Organizing Committee

Organizing Chairs

Dr. Prashanth C.S.R
Dean-Academics & HOD, Dept. of CSE

Dr. Jitendranath Mungara
HOD, Dept. of ISE

Co-ordinator & Organizing Secretary

Dr. S. Mohan Kumar
Associate Professor

Co-Coordinators

Dr. Vishwanath Y.
Mr. Vikas B. O. (9620223345)
Ms. Prakruthi S. T. (7795490955)
Ms. Gowri Prasad (9526179273)

Registration

- There is no registration fee for the FDP but an amount of Rs. 500 (refundable) in the form of **Demand Draft drawn in favour of "The Principal, NHCE, Bangalore",** Payable at Bangalore, is required. It will be refunded to the participant if he/she attends the FDP. In case a participant does not attend the FDP, the above amount will be forfeited.
- If selected, faculty members should attend the training programme in full
- Preference will be given to young & dynamic faculty members who are working in colleges approved by AICTE
- Selection will be made on first-come, first-server basis and is limited to **50 candidates.**
- Selected candidates will be intimated through E-mail only
- TA will be provided for outstation participants only as per AICTE norms.
- Tea & Working lunch will be provided
- Accommodation will be provided for outstation candidates in students hostel or guest house on sharing basis
- Faculty members who wish to attend should submit the filled-in registration form forwarded by Head of the Institution to the Coordinator by post on or before **03.12.2017**
- Scanned copy of the filled-in application form can also be E-mailed to **nhce.ise.tfdp2017@gmail.com**

Important Dates:

Last Date for Registration : 03.12.2017
Notification of Acceptance : 04.12.2017
Confirmation to Participants : 05.12.2017

NEW HORIZON COLLEGE OF ENGINEERING

Autonomous College Permanently Affiliated to VTU, Approved by AICTE & UGC
Accredited by NAAC with 'A' Grade, Accredited by NBA

The Trust is a Recipient of Prestigious Rajyotsava State Award 2012 Conferred by the Government of Karnataka
Awarded Outstanding Technical Education Institute in Karnataka-2016

AICTE Sponsored

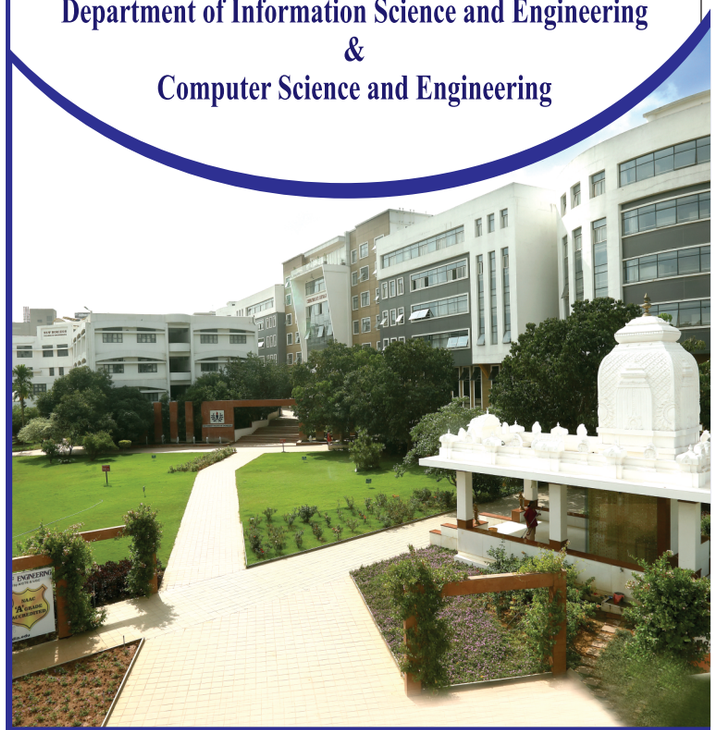
Two Week National Level Technical Faculty Development Programme on

RESEARCH FRONTIERS IN ADVANCED NETWORKING, SECURITY AND IOT – A TOOL DRIVEN APPROACH

11th to 23rd December, 2017

Organized by

Department of Information Science and Engineering
&
Computer Science and Engineering



www.newhorizonindia.edu
Ring Road, Bellandur Post, Near Marathalli, Bangalore -560 103, INDIA

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To_____

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NEW HORIZON
COLLEGE OF ENGINEERING

11-12-2017

DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING

Report on FDP

To meet the ever-demanding needs of knowledge industry, Faculty development programs (FDP) have always been an effective tool to enhance research and teaching capabilities of educators. Aiming at developing competences in recent advances in Information Technologies, New Horizon College of Engineering is conducting an AICTE sponsored 2-weeks National Level Faculty Development Programme. This Technical faculty development program is aimed as a Research Frontiers in Advanced Networking, Security and IoT-A Tool Driven Approach. This event is being jointly organized by Department of Information Science & Engineering and Computer Science & Engineering, New Horizon College of Engineering.

The Inaugural ceremony of Technical Faculty Development Programme was outset on 11th December 2017 at falconry, New Horizon College of Engineering, with the Lamp Lighting by Guest of Honor Padmashri. Prof. R.M. Vasagam Chairman, Aerospace Engineering Division Board, (The Institution of Engineers). A warm welcome speech was delivered by Dr. Jitendranath Mungara, Head of Information Science and Engineering Department which kick-started the function. Dr. Prashanth C.S.R, Dean Academics, Head of Computer Science and Engineering Department shared the agenda of Technical FDP to the participants presenting his views on Internet of things. Dr. Manjunatha, Programme Chair and Principal, New Horizon College of Engineering gave a mind-provoking talk on research and innovation in education sector and its impact on society.

The guest of honor, Padmashri. Prof. R.M. Vasagam gave a motivating speech on true research and its importance in India. He briefed through the Internet of Things technology and its relevance on mankind. Participants were engrossed with his influential and technical session address. Participants from various Engineering colleges across India have registered and will ripe the maximum benefit from this session.

Industry experts and renounced academicians from various leading IT organisations ,R&D fields will present the current trends , business perspective, research challenges in Internet of Things, Advanced networking, Security domain. The Inaugural session was succesfully concluded with Vote of Thanks by Dr. S.Mohan Kumar, Organizing Secretary & Associate Professor, New Horizon College of Engineering.

Addressing the gathering by the Chief Guest Padmashri.Prof. R M Vasagam, Dr. Jitendranath Mungara, HOD-ISE, Dr. Prashanth C.S.R. Dean-Academics & HOD-CSE, Dr. Majunatha, Principal, NHCE, Dr. S. Mohan Kumar, Organizing Secretary (NL-TFDP) (From Left to Right)

Addressing the gathering by the Chief Guest Padmashri.Prof. R M Vasagam

Engrossed participant in NL-TFDP

Date: 11.12.17 **Time**: 11.30am to 12.45pm

A Technical talk on "**Internet of Everything** " was delivered by Mr Jayaram Beladakere Director, Product Management, Cisco Systems India. He had 20 years of solid accomplishments, gaining and demonstrating a wealth of experience as System and network architect, Strategic product manager , R&D leader.He has experiences with large corporations as well as start-ups and effective in managing international stakeholders (US, India and Europe) and complex environments.

Key highlights of the talk were:

Mr Jayaram started his talk with Converging Digital Disruptions and how to Create a Unique Inflection Point .

He gave a clear picture of how in Cisco the Internet of Everything (IoE) is used to create a networked connection of People, Process, Data and Things Connecting People in More Relevant, Valuable Ways Delivering the Right Information to the Right Person (or Machine) at the Right Time Leveraging Data into More Useful Information for Decision Making Physical Devices and Objects Connected to the Internet and Each Other for Intelligent Decision Making.

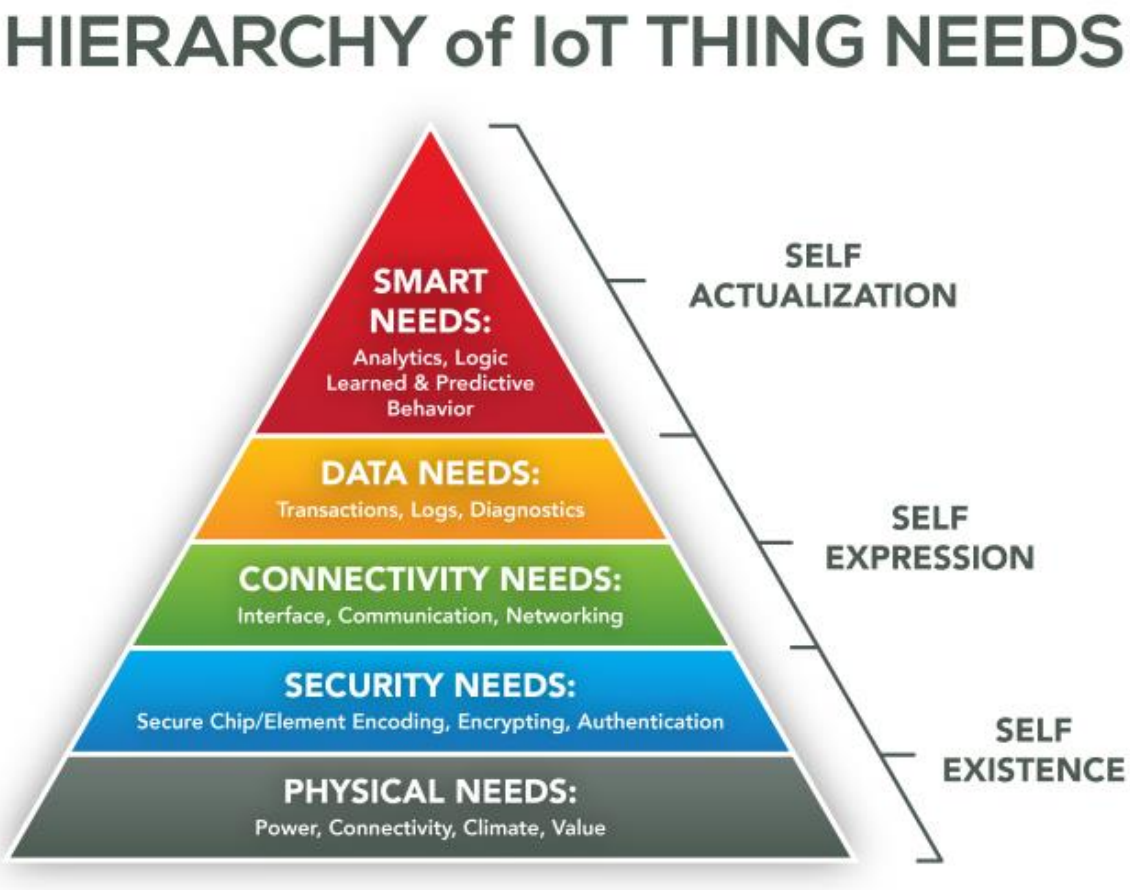
He gave an overview of how IoT is Here Now – and how it is Growing, Sizing the Opportunity in all fields ,Private Sector and in Public Sector .

Participants gained knowledge on how practically IoE is applied Across Industries and in modern Cities.

Mr Baladekere discussed about various IoE-City Challenges like rapid urbanization, Environmental pressure and Economic pressure.How IoE can be used for well being-people and planet.

He extended his talk on IoT applications in environment,health care,agriculture,conservation etc.He gave a picture of bringing IoE to Life Business Models and Capturing Value.

He gave an overview of maslow's hierarchy of IoE.



Finally he concluded his talk saying that IoT is Complex as Majority of customers wants an integrated system with combination of all technologies.

Report prepared by: M S Shobha.

Date: 11.12.17 **Time**: 1:30pm to 4:30pm

A Technical talk on "**IoT and Advanced Analytics Research Trends & Innovation Opportunities**" was delivered by Dr.Madhan Kumar Srinivasan Associate Vice President – Big Data & Cloud Analytics Product Offerings Accenture Innovation Center for Analytics, Bangalore, India Founder Member, Cloud Computing Innovation Council of India.

Dr Madhan is an IIM-Calcutta alumnus, he has worked as an Asst. Director & Principal Consultant at GSTF, Singapore and as a Senior Member-E&R at Infosys, India. Dr.Madhan is an inventor of 10 Advanced Cloud Analytics Products patents that are independently filed as multi-continent patents in USA, Europe/UK, Australia & India regions. Dr.Madhan is a recipient of “Top 100 Scientists for 2014” Award from IBC, Cambridge, England. He also received Accenture’s most prestigious global award “Accenture Inventor Award” from Accenture for the year 2017 and “Cloud Tech Guru” Award from Infosys for the year 2012.

Key highlights of the talk were:

Dr Madhan started has talk giving a brief overview on advanced analytics and gave an overview on IoT Analytics Landscape.Then there was a interactive discussion about Big Data The next cutting edge for Productivity,market fore casting.He gave an overview of Hadoop history and its importance in big data technology.

Big Data Integration for Analytics with Cloud Offering was discussed, he also elaborated the structure of IoT and Hadoop integration for IoT.

He also provided information on Industrie/Industry 4.0,and Internet of Things Internet of Services – i.e. Cloud, Cyber-Physical Systems/Security.

A detailed discussion about Cloud Computing and Analytics was given.participants had an interactive session on State-of-the-art cloud Computing Security Taxonomies.

Report prepared by: M S Shobha.

Key note address on "Internet of Things"

Date: 12.12.17 **Time**: 9:30am to 11:00pm

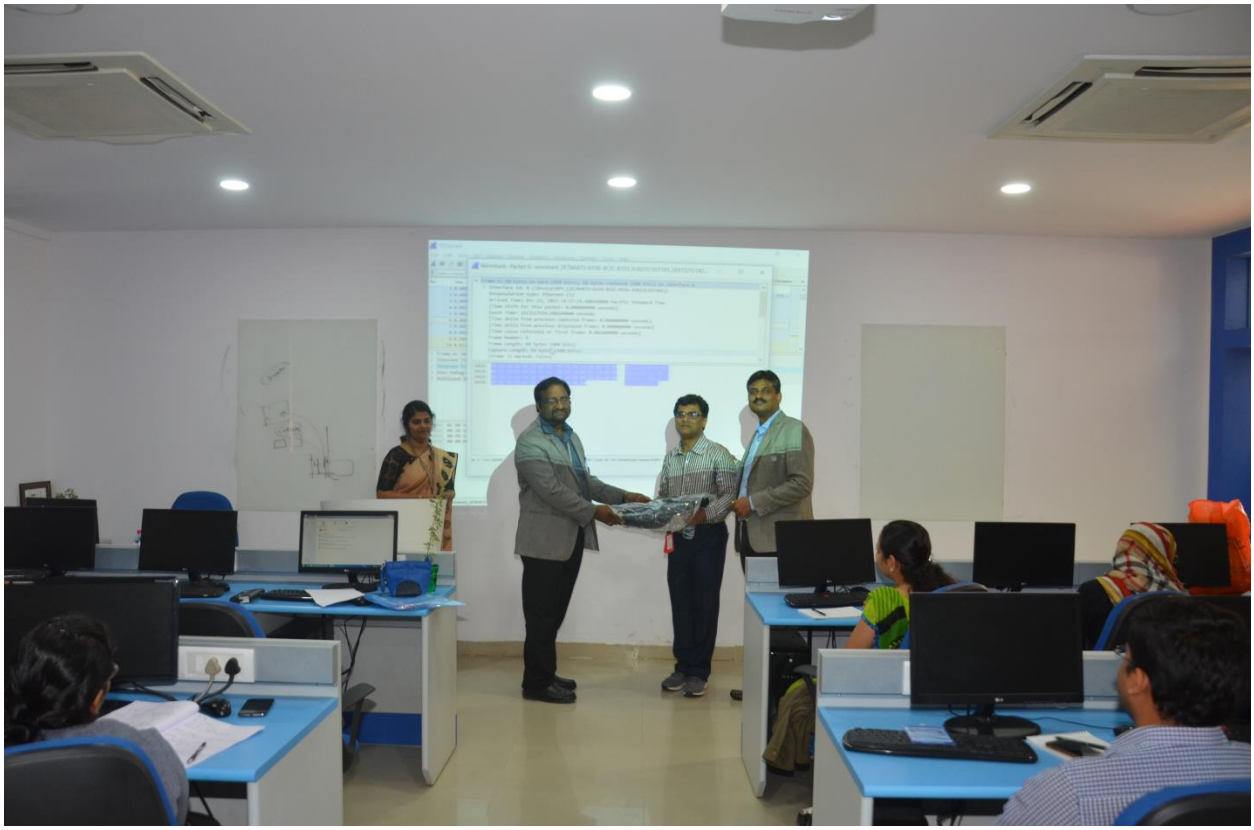
Key note address on **"Edge computing and IOT architecture"** was delivered by **Dr. Mohan kumar , R&D coordinator, Dept of ISE**,NHCE and Mr.Darpan M ,Principal engineer ,symbol pvt Ltd,Bangalore.

The talk started with an overview of current trends in Edge computing and IOT architecture and its research development. Further the talk progressed with various interaction sessions on Internet of Things among the participants. The talk was very interesting and knowledgeable. Finally, the talk was successfully ended up and faculty members shared their experiences and views about the sessions through Feedback.

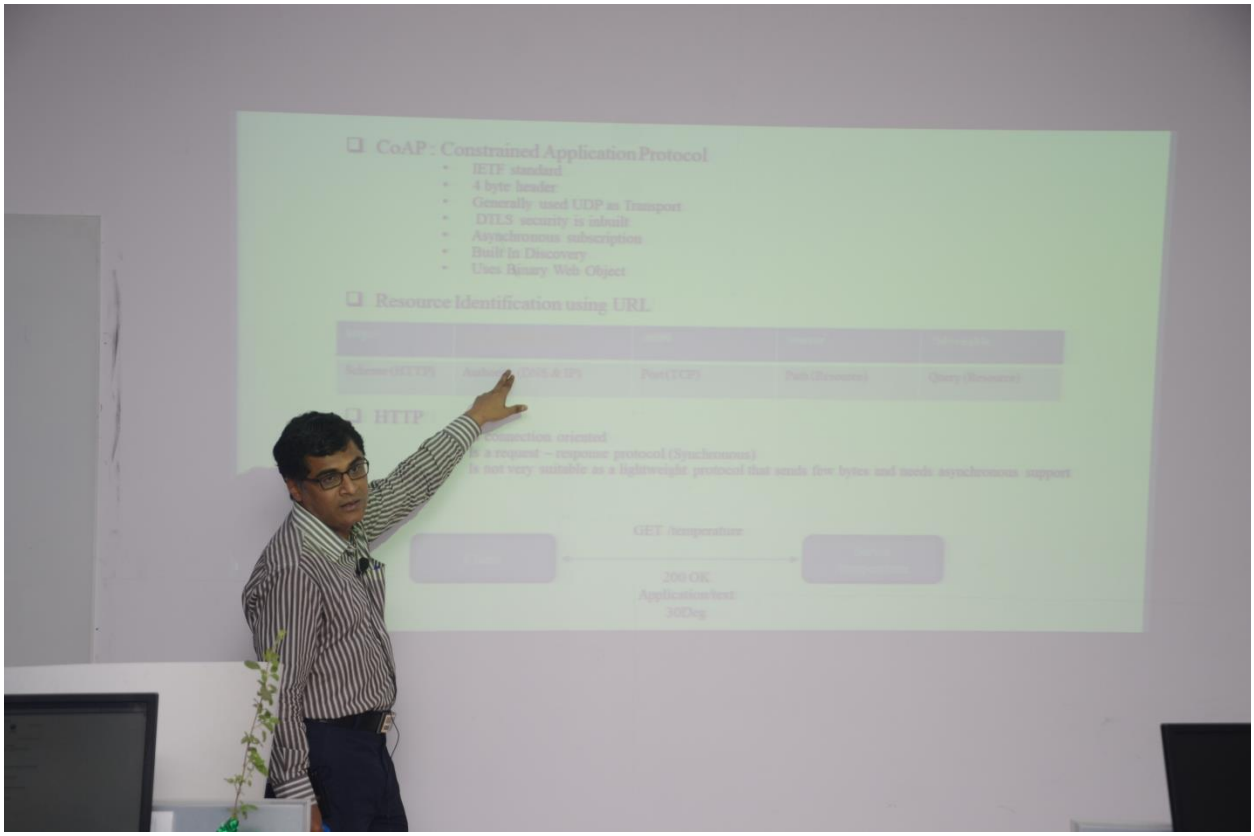
Key highlights of the talk were:

- IOT model and introduction to IOT
- Protocol and components of IOT
- Cloud edge computing model
- IOT connectivity framework
- challenges in IOT
- Machine learning
- Machine learning testing
- Big data

Various sessions throughout the Training



An Inspirational talk about the purpose and benefits of the **Edge computing and IOT architecture** was given by Dr. **Mohan kumar**, **, R&D coordinator** ,Department of Information Science & Engineering.



Mr.Darpan M ,Principal engineer ,symbol pvt Ltd,Bangalore,The talk on research trends in Edge computing and IOT architecture and machine learning techniques.

Inbox x

Report prepared by: Mounica.B,
Dept. of ISE.

Key note address on "Impact of implementing IOT in India-Macro issues to handle and recommended framework"

Date: 12.12.17 **Time**: 11:15am to 12:30pm

Key note address on **"Impact of implementing IOT in India-Macro issues to handle and recommended framework"** was delivered by **Dr.Kavitha ,Professor .BMSIT,Bengaluru.**

The talk started with an overview of current trends in Internet of Things and its research development. Further the talk progressed with various interaction sessions on Internet of Things among the participants. The talk was very interesting and knowledgeable. Finally, the talk was successfully ended up and faculty members shared their experiences and views about the sessions through Feedback.

Key highlights of the talk were:

- case study in IOT
- Statistics in IOT
- Smart farming
- Techniques in Smart farming
- Smart farming merits and demerits
- case study on agricultural intrusion detection
- case study Hydroponic
- The interaction Genesis Theory

Various sessions throughout the Training

An Inspirational talk about the purpose and benefits of IOT in agriculture the expert talk was given by Dr. Jitendranatha Mungara, Professor & Head, Department of Information Science & Engineering.

Dr.Kavitha ,Professor .BMSIT, Bengaluru ,she started with an overview of current trends in Internet of Things agriculture and its research development. Further the talk progressed with various interaction sessions on Internet of Things in field of agriculture.

Report prepared by: Mounica.B ,
Dept. of ISE.

NEW HORIZON
COLLEGE OF ENGINEERING

Date: 12.12.17 **Time**: 1.30pm to 3.30pm

A Technical talk on "**Myths and Realities of R&D at Engineering Colleges: opportunities and challenges**" was delivered by Dr. Goplakrishnan, Dean-R&D, New horizon college of engineering.

Key highlights of the talk were:

Dr. Gopalakrishnan gave innovative sprit and motivation to all the faculty members and inspired them to enhance their knowledge in research field. He had also showcased the various opportunities available for sponsored research funding (grants) at national and international level agencies' and also the compilation of funding formats, thrust areas etc to sensitize/strengthen the R&D activities at engineering colleges . Adequate emphasis was given to academic research (PhD/MS-By Research), Dispel the Myths and Realities of Impact Factor, Over View of Plagiarism Detecting Software, IPR and Patents' Filling Formats etc. He shared his thoughts on galvanizing the culture of creativity and innovation at every campus in India. It was overall an inspiring and innovative talk by Dr. Gopalakrishnan, Dean-R&D, NHCE.

Dr. Jitendranath Mungara, HOD-ISE presenting sapling to Dr. Gopalakrishnan, Dean-R&D, NHCE

Dr. Gopalakrishnan, Dean-R&D, NHCE delivering informative session on realities of R & D at engineering colleges.

Dr. Gopalakrishnan, Dean-R&D, NHCE interacting with the participants

Dr. Manjunatha, Principal-NHCE, presenting token of appreciation to Dr. Gopalakrishnan, Dean-R&D, NHCE

Report prepared by: Prakruthi S T, Dept. of ISE.

NEW HORIZON
COLLEGE OF ENGINEERING

Date: 12.12.17 **Time**: 3.40pm to 4.45pm

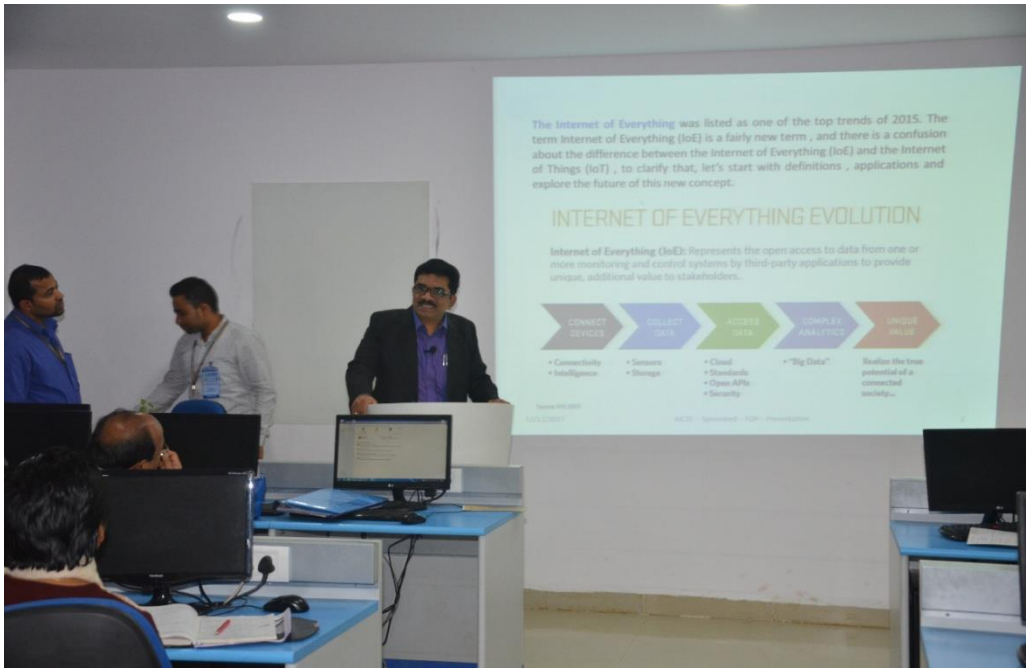
A Technical talk on "**Internet of Everything: IoT versus IoE** " was delivered by Dr.Manjunatha, Principal, New Horizon college of Engineering.

Key highlights of the talk were:

Dr. Manjunatha shared his vast knowledge on digital embedded in everything we do, every business and new reality that requires a comprehensive digital leadership.

He also provided information on Internet of everything, which is bringing together people, process, data, and things to make networked connections more relevant and valuable than ever before-turning information into actions that create new capabilities, richer experiences, and unprecedented economic opportunity for businesses, individuals, and countries.

Participants had very nice interaction on how companies decide to balance customer privacy with this wealth of IoE data and how Enterprises will make extensive use of IoE technology.



Dr. Manjunatha, Principal, NHCE delivering informative session on Internet of Things.

Dr. Jitendranath Mungara, HOD-ISE presenting token of gratitude to Dr. Manjunatha, Principal, NHCE

Report prepared by: Prakruthi S T, Dept. of ISE.

Key note address on "Technology and business"

Date: 13.12.17 **Time**: 1:30am to 4:30pm

Key note address on **"Technology and business"** was delivered by **Dr. Prashanth CSR ,** Dean academics**,**NHCE .

The talk started with an overview of current technology in Big data analytics and its research development. Further the talk progressed with various interaction sessions on Technology and business using big data analytics among the participants. The talk was very interesting and knowledgeable. Finally, the talk was successfully ended up and faculty members shared their experiences and views about the sessions through Feedback.

Key highlights of the talk were:

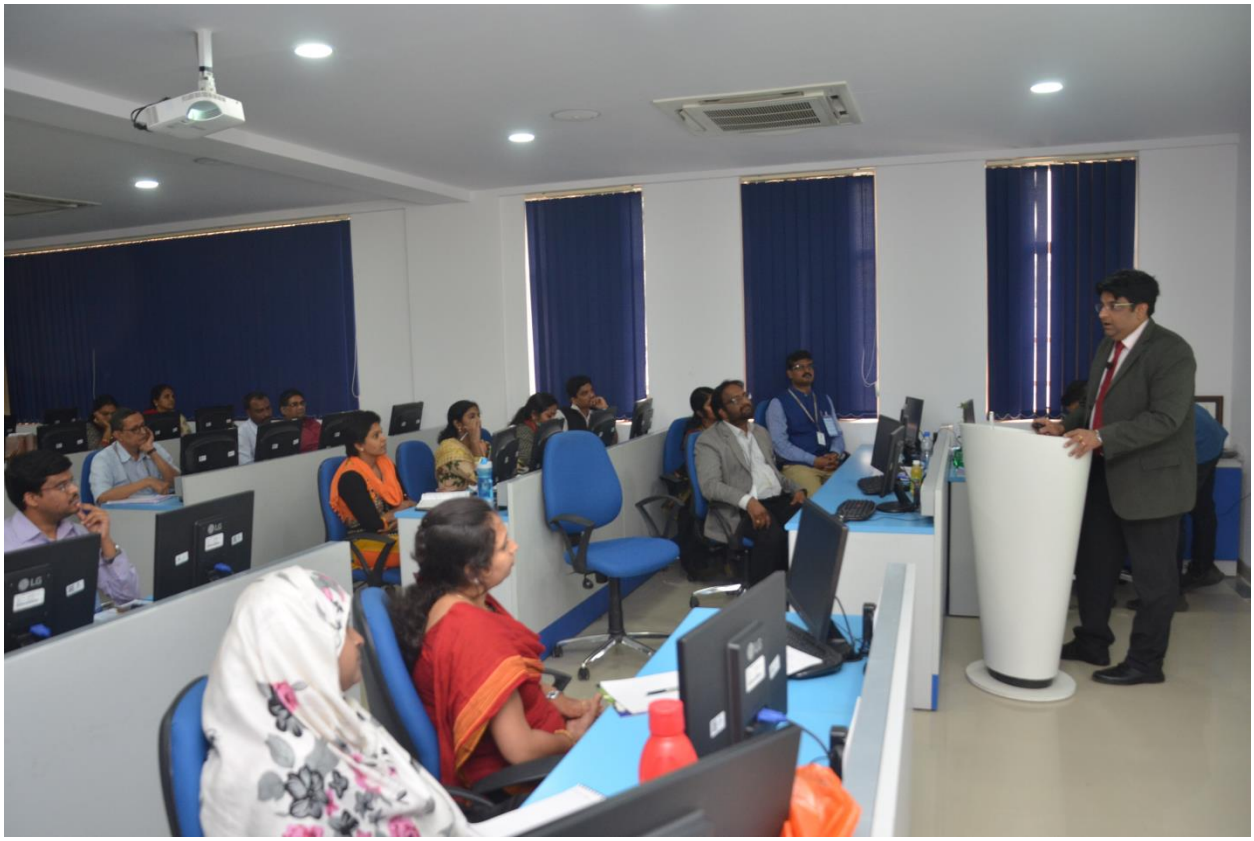
- Big Data Analytics
- Machine Learning
- Artificial Intelligence
- Real-Life Business Examples
- Reduced Time to Market (Bristol-Myers Squibb)
- Optimize the Workforce (Xerox)
- Enhanced Financial Performance (Weather.Com IBM)
- Sell Intelligently (Kroger)
- Minimize Equipment Failure (Pratt and Whitney)
- Leverage Customer Lifetime Value (Avis-Budget)

Various sessions throughout the Training

An Inspirational talk about the purpose and benefits of the "**Technology and business"** was given by Dr. **Prashanth CSR ,** Dean academics,NHCE

The talk continued with Big Data Analytics, Machine Learning, Artificial Intelligence, Real-Life Business Examples of

- Reduced Time to Market (Bristol-Myers Squibb)
- Optimize the Workforce (Xerox)
- Enhanced Financial Performance (Weather.Com IBM)
- Sell Intelligently (Kroger)
- Minimize Equipment Failure (Pratt and Whitney)
- Leverage Customer Lifetime Value (Avis-Budget).



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Report prepared by: Mounica.B,
Dept. of ISE.

Report ------- "Workshop on Machine Learning using R"

Date: 15.12.17 **Time**: 9:30am to 05:00pm

Workshop on **"Machine Learning with R"** was conducted by **Mr.Mithun, Asst. Manager, Predictive Analysis, Bangalore.**

The workshop focused on machine learning methodology with respect to real-world analytics problems. It provided a detailed overview into various aspects such as problem formulation, data preparation, feature engineering, model selection and model refinement.

The workshop started with an overview of R language as a Statisics Software Package and Applied Machine Learning. Further it progressed with Uses and Applications of R Language.

Hands-on Session was conducted for the following with R:

- Useful Packages.
- Manipulate data.
- Visualize data.
- Model the data.

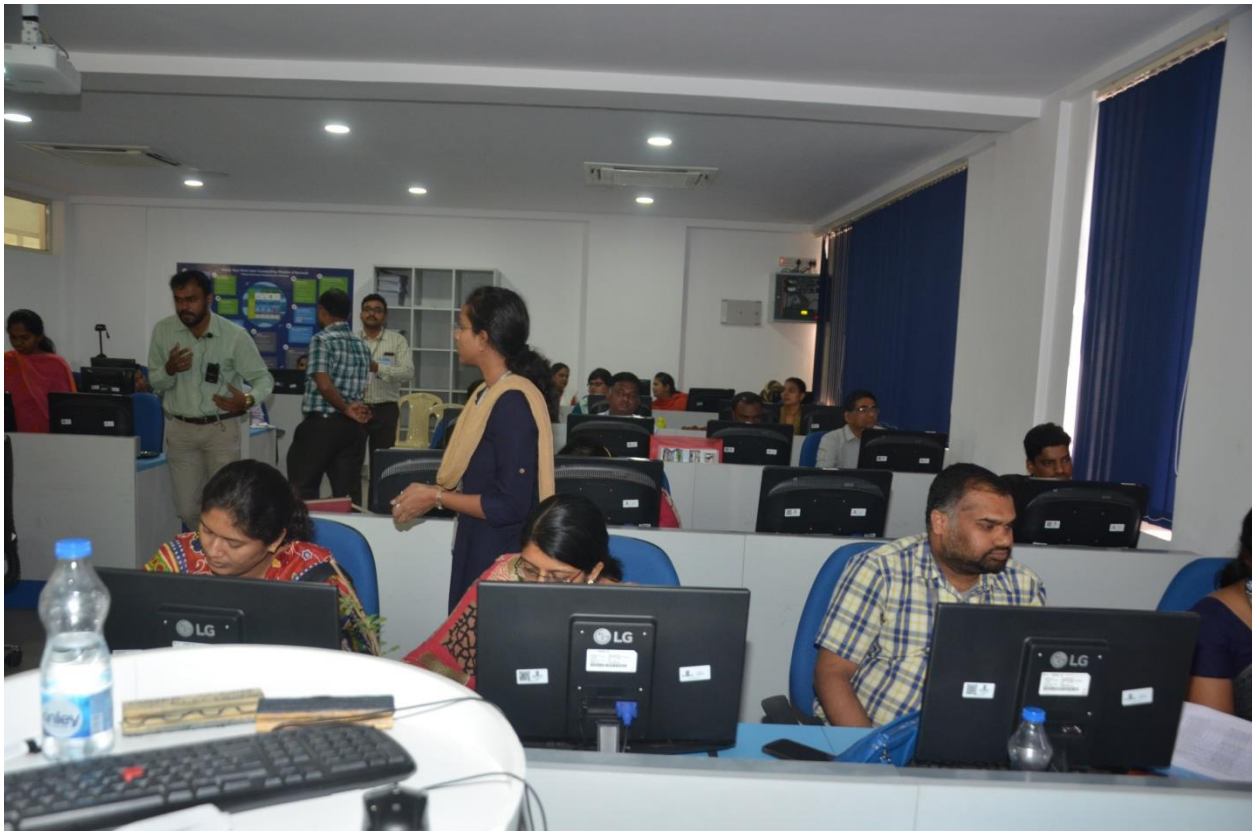
Key highlights of the Workshop:

- Connect the power of R to build common machine learning algorithms with real-world data science applications.
- Use R techniques to clean and prepare the data for analysis and visualise results.
- Discover the types of machine learning models and learn the best to meet the data needs and solve analysis problems.
- Classify the data with Bayesian and nearest neighbour methods.

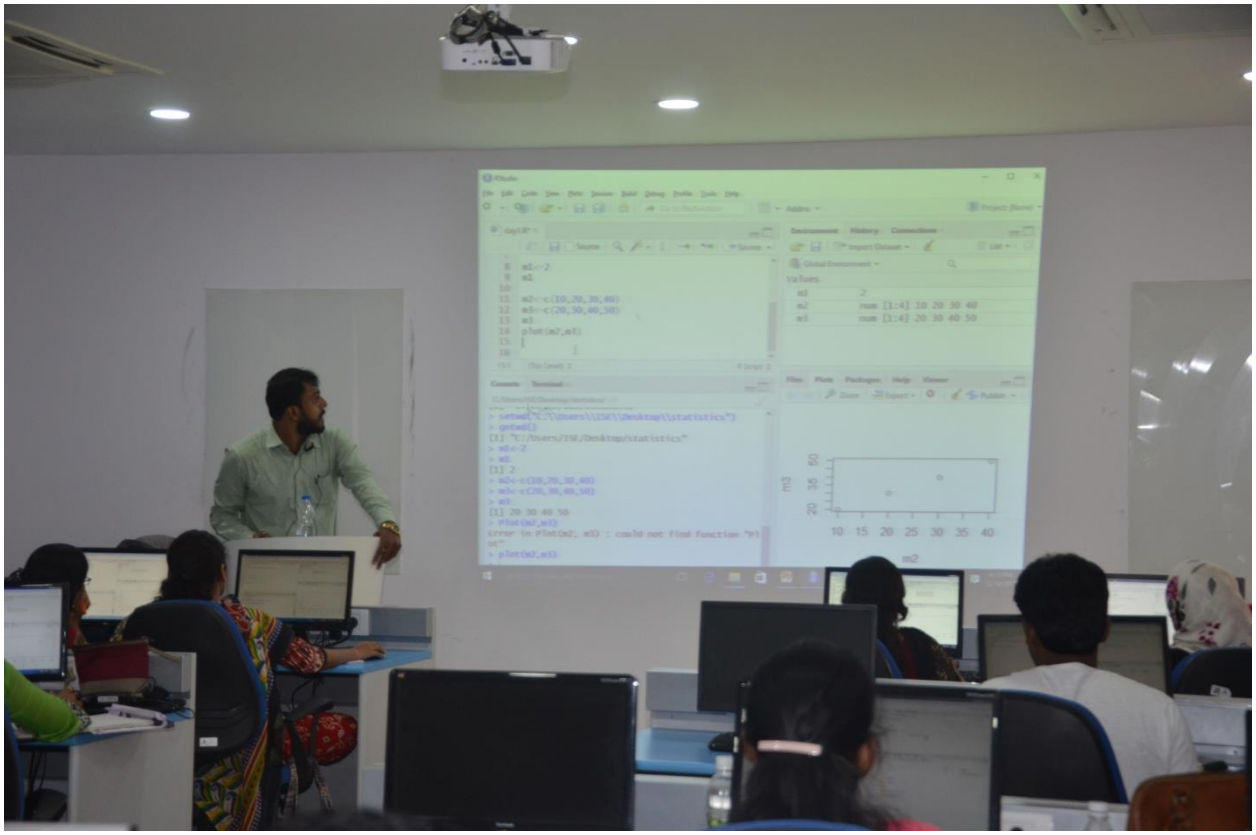
- Predict values by using R to build decision trees, rules, and support vector machines

Various sessions throughout the Workshop

Dr.Jitendranath Mungara, HOD-ISE, Presenting Sapling to Mr.Mithun, Speaker of the Workshop



Participants in Hands-on Session.



Hands-on with R-studio.

Workshop was informative and participants shown keen interest and enthusiasm.

Report prepared by:
B.Swathi,
Dept. of ISE.

Date: 16.12.17

Session on “Designing Internet of Things (IoT)” **by Mr. Shyam Madanapalli,Director-IoT,NTT Data**

Email : smadanapalli@gmail.com

Objectives :

- Origin
- Definition
- Applications
- Technologies
- Design

Contents covered during the session are state of the data,control mechanism,Data source,evolution of IoT, various applications, IoT devices, products,challeneges,protocols, design concepts.

Mr.Shyam Madanapalli delivering the contents on IoT

Mr.Shyam Madanapalli felicited by Dr.Mohankumar S

Group Photo with Participants

Workshop on "Hybrid Mobile App Development"

Date: 18.12.17 **Time**: 9:30am to 4:30pm

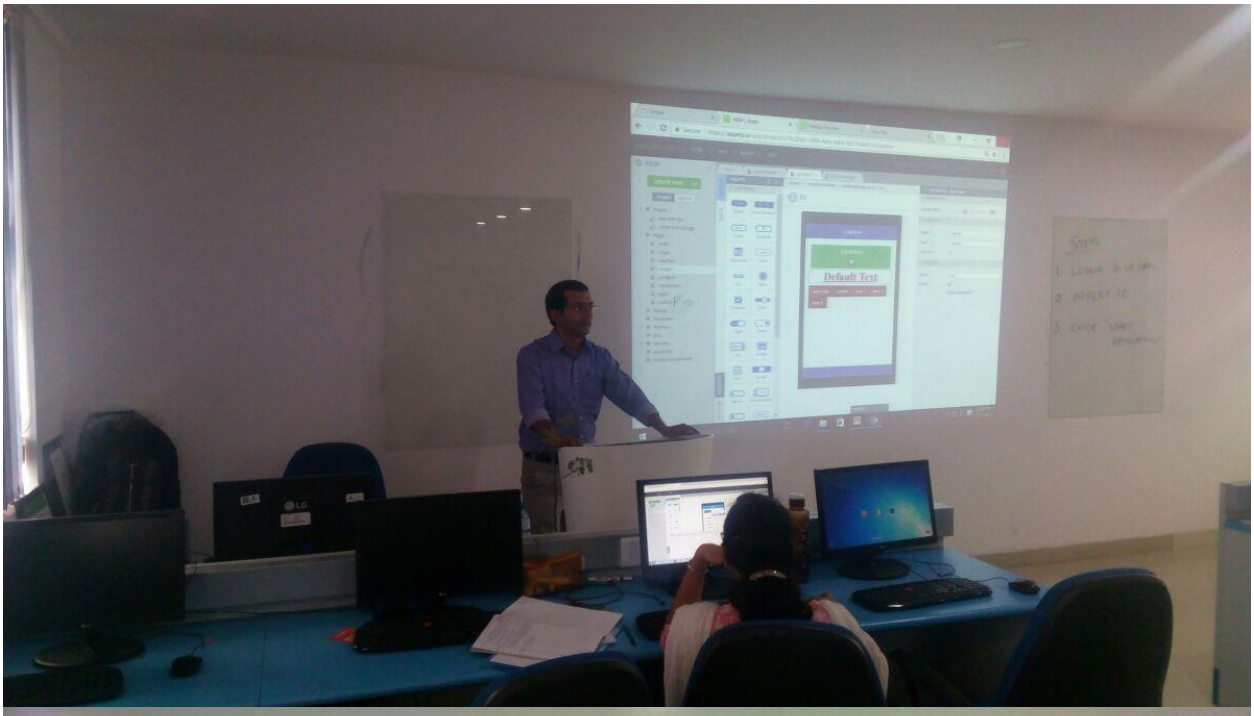
Workshop on **"Hybrid Mobile App Development"** was delivered by **Mr. Ramkumar Arumugham**, Freelancer, Madurai, Tamil Nadu.

The session started with an overview of how to develop mobile app using framework. Further speaker started presentation on Android App Development using Appery.io framework. The session was very interactive and informative.

Key highlights of the talk were:

- About Appery.io framework
- How to use framework to build app
- How to upload audio, video, & images
- How to generate certificate
- How to import and upload app into mobile
- How to update app
- How to Register the App
- Exercise to develop an own app.

Finally, participants successfully developed their own Apps.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COLLEGE OF ENGINEERING
Networking, Security and
Freelancer.
Time: 09:30am to 04:30pm

NEW HORIZON
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Freelancer.
Time: 09:30am to 04:30pm

Key note address on "Frontiers in Research in Internet of Things"

Date: 20.12.17 **Time**: 9:30am to 11:00pm

Key note address on **"Frontier in Research in Internet of Things"** was delivered by **Dr.Jitendranth Mungara, HOD,Dept of ISE**, **NHCE**.

The talk started with an overview of Architecture of IOT and current trends in IOT, which in depth dealt with the following:

- Application Layer
- Gateway and Network Layer
- Management Service Layer
- Sensor Layer

Further the talk progressed with several application domains which will be impacted by the emerging Internet of Things which includes huge crossover in applications and the use of data between domains.

Talk addressed about the smart city with IoT, building blocks and the implicit challenges.

Key highlights of the talk addressed:

- The usage of Devices to use information to prescribe and predict the future.
- Creation of IPs by the Start-ups that will be picked up by large companies.
- Data sharing and privacy debate continuation.
- Smart city Architecture and Challenges.
- IoT efficiency at home and industry.

Various sessions throughout the Training

An Inspirational talk about the “Frontiers in Research in IoT” was given by Dr. **Jitendranath Mungara,HOD**, Department of Information Science & Engineering.

Report prepared by:
Swathi.B,
Dept. of ISE.

Key note address on "Cloud Computing: Evolution as a Service and its Applications"

Date: 20.12.17 **Time**: 3:50 pm to 4:50 pm

Key note address on "**Cloud Computing: Evolution as a Service and its Applications"** was delivered by **Dr. Ganesh Kumar, Associate Professor, Dept of CSE**, **Christ University**.

The talk started with an overview of Architecture of Cloud Computing and current trends in Cloud Computing, which in depth dealt with the following:

- IaaS (Infrastructure-as-a-Service)
- PaaS (Platform-as-a-Service)
- SaaS (Software-as-a-Service)

Further the talk progressed with several application domains which will be impacted by the emerging Cloud Compuitng.

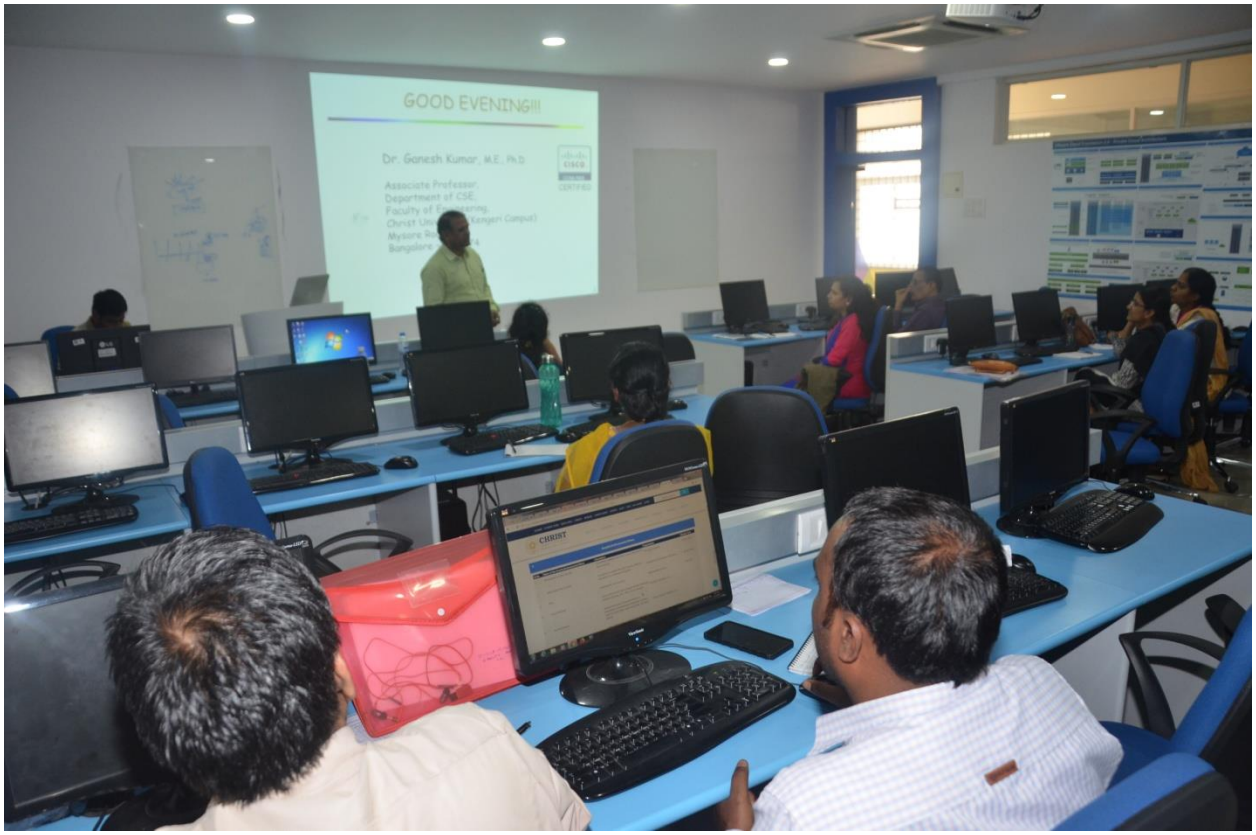
Talk addressed about impact of Cloud computing on IT outsourcing, Cloud a fundamental shift in how organizations pay for and access IT services.

Key highlights of the talk addressed with respect to Clod Computing:

- Global Outsourcing
- Methodology/Design
- Findings
- Practical Implications

Various sessions throughout the Training

HOD,ISE Department ,NHCE addressing the Guest speaker Dr.Ganesh Kumar with Sapling



Participants showing keen interest in the session .

Report prepared by:
Swathi.B,
Dept. of ISE.

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Workshop on "ETHICAL HACKING AND CYBER SECURITY"

Date: 21.12.17 **Time**: 9.30am to 4:30pm

22.12.17 9.30 am to 12.30pm

A Workshop on "**Ethical Hacking and Cyber Security**" was conducted by Mr. OOPS, i3-indya Technologies.The workshop started with an overview of ethical hacking and cyber security. Further the talk progressed with various interaction sessions on ethical hacking and cyber security among the participants. Hacking is not about the illegal things it's all about how to secure the cyberspace and system from attacks. Mr.OOPS explained about the basic knowledge of hacking and how to protect the system against hazardous effects.The talk was very interesting and knowledgeable. Finally, the talk was successfully ended up and faculty members shared their experiences and views about the sessions through Feedback.

Key highlights of the talk were:

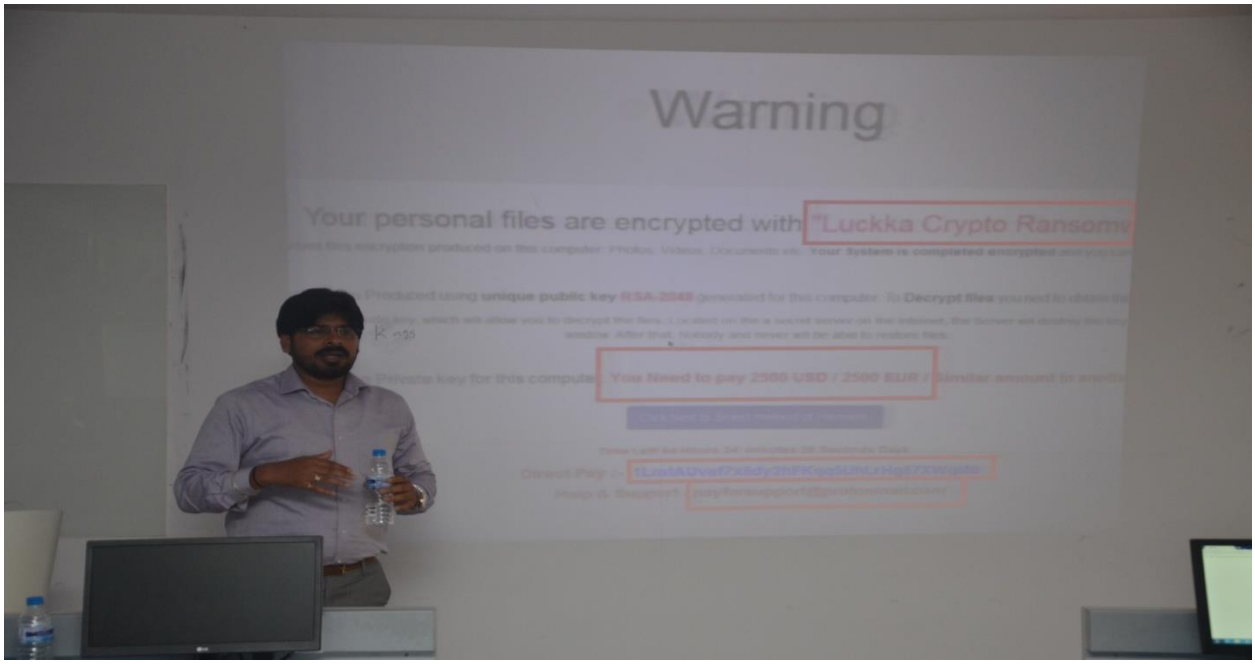
- Exposure to Ethical Hacking the latest tools and methods being used by cyber criminals & terrorists and how ethical Hackers can fight them.
- How attacks bypasses second step verification security of email within seconds.
- Reset Windows admin password (Include Window 7,8,10) within second with the help of guest account without any softwares.

- Some most live shocking cases solved by i3indya team.
- Email hacking & security
- Malware attacks, windows system attacks.
- Online data Investigation.
- Credit card frauds & Cases.
- Playing with Google by Google hacking
- Android mobile hacking.

Various sessions throughout the Training

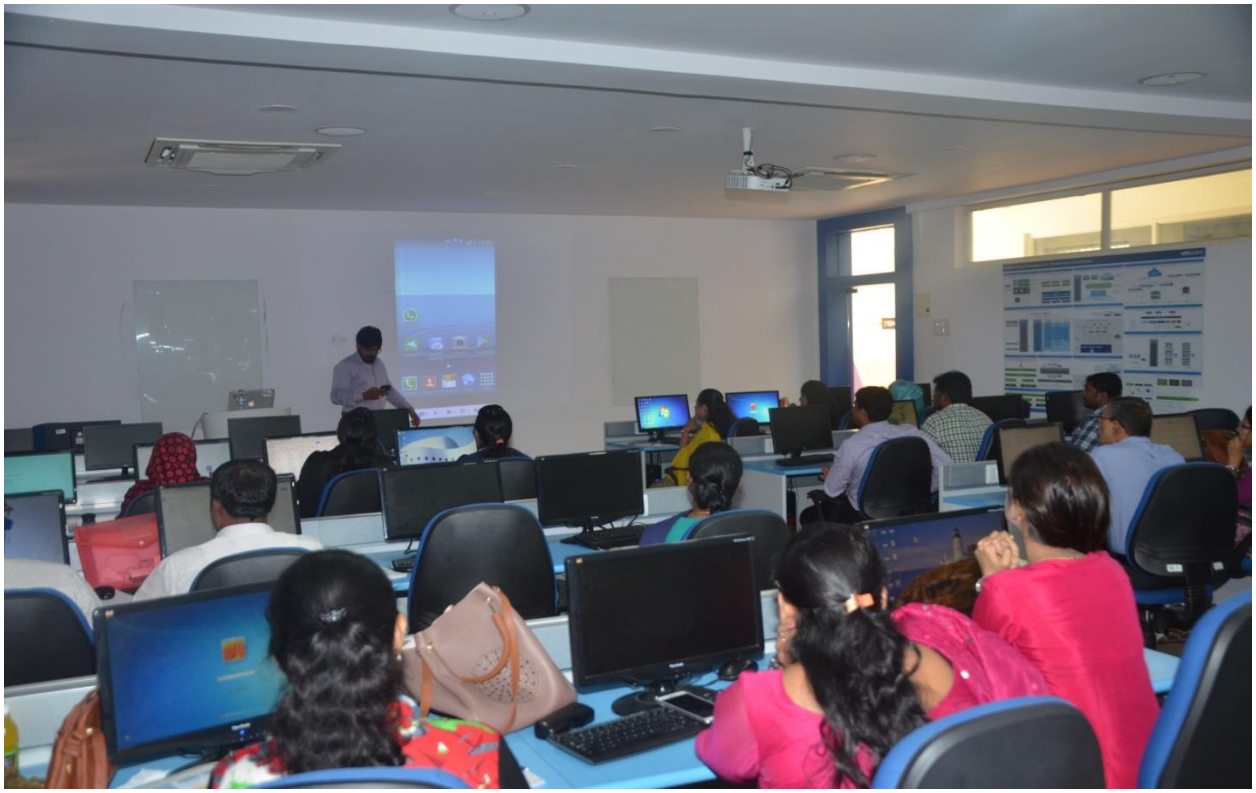
Dr.Mohankumar. S, Dept.of ISE, felicitating the Speaker with Tulsi Sapling.

Mr.OOPS explains the fundamentals of ethical hacking.



Mr.OOPS talks about Paytm and wallet frauds.

Mr.OOPS explaining the participants about mobile hacking.



Mr.OOPS with the participants

Report prepared by: A.Rafega Beham, Dept. of ISE.

Expert Talk on

"Recent Advances in Machine Learning & Deep Learning"

Date: 22.12.17 **Time**: 03:40pm to 04:30pm

Expert Talk on **"Recent Advances in Machine Learning & Deep Learning"** was delivered by **Dr. Dinesh R, Principal Engineer, Samsung, Bangalore**.

The talk started with an overview of Neural Networks and current trends in Machine Learning, which in depth dealt with the following:

- Background
- Computers Vs Neural Networks
- Applications
- Simple Neural network model
- Learning Rule
- Types of Neural Networks
- Challenges

Further the talk progressed with different types of classifiers and brief explanation with case studies

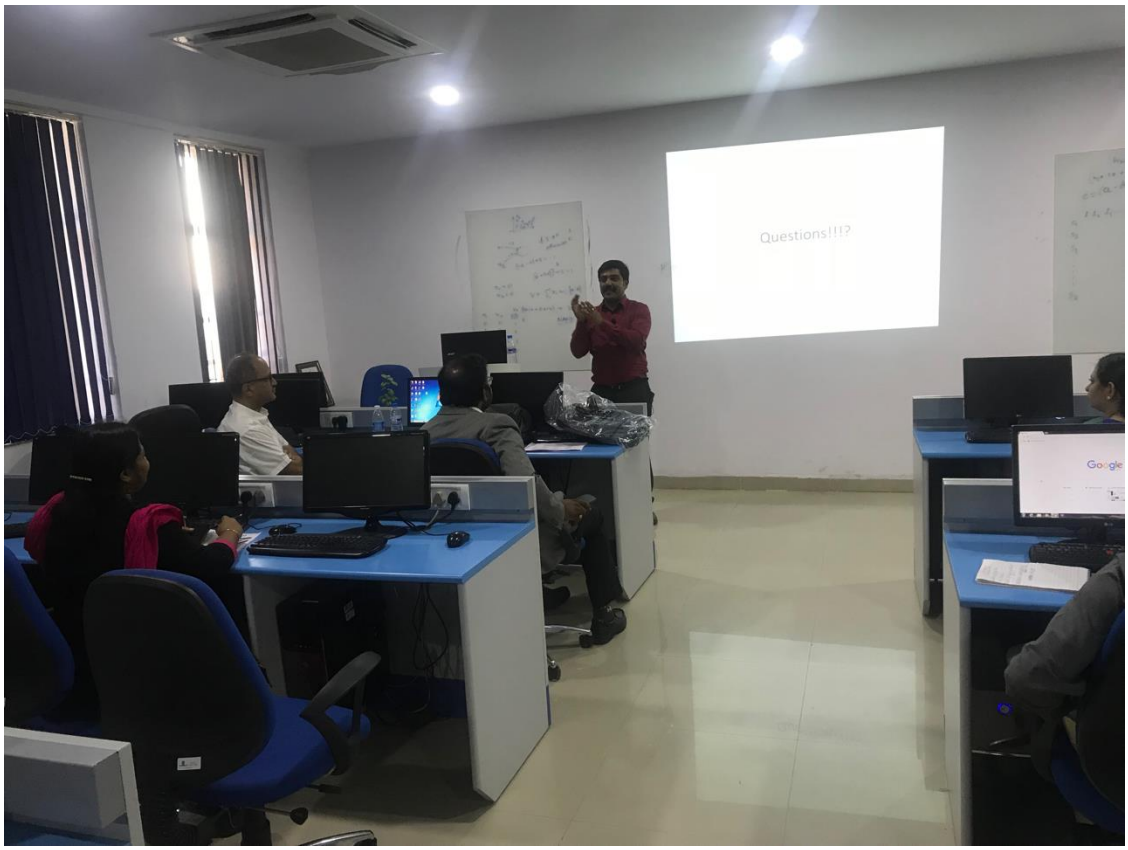
- Bayesian Classifier
- K-Nearest Neighborhood classifier
- Decision Trees
- Boosting Classifiers
- SVM
- Neural Networks

Talk addressed about the ANNs Artificial Neural Networks and few case studies in solving a machine learning problem.

Key highlights of the talk addressed:

- Overview on Neural Networks
- Machine learning Process:
    - Feature Extraction
    - Adequate Representations
    - Reinforcement
- Overview on Machine Learning Fundamentals
- Types of Classifiers
- NNs vs Computers
- Applications of NNs
    - Classification
    - Recognition and identification
    - Assessment
    - Forecasting and prediction
- ANNs- Basics
- Operation of Neural Networks with case study

<u>Various sessions throughout the Training</u>


Questions!!!?

Report ------- Sensor Networks and IoT

Date: 23.12.17 **Time**: 09:30am to 12:30pm

Talk on "**Sensor Networks and IoT"** was delivered by Dr. T. R. Ganesh Babu, Professor in ECE, Muthayammal Engineering College, TamilNadu.

The talk started with definition and types of Sensors. Further the talk progressed with various applications of sensors like Biometrics, Temperature sensors, Accelerometer, and so on .Session also extended for concepts of IoT. The talk was very interesting and knowledgeable. Finally, the talk was successfully ended up and faculty members shared their experiences and views about the sessions through Feedback.

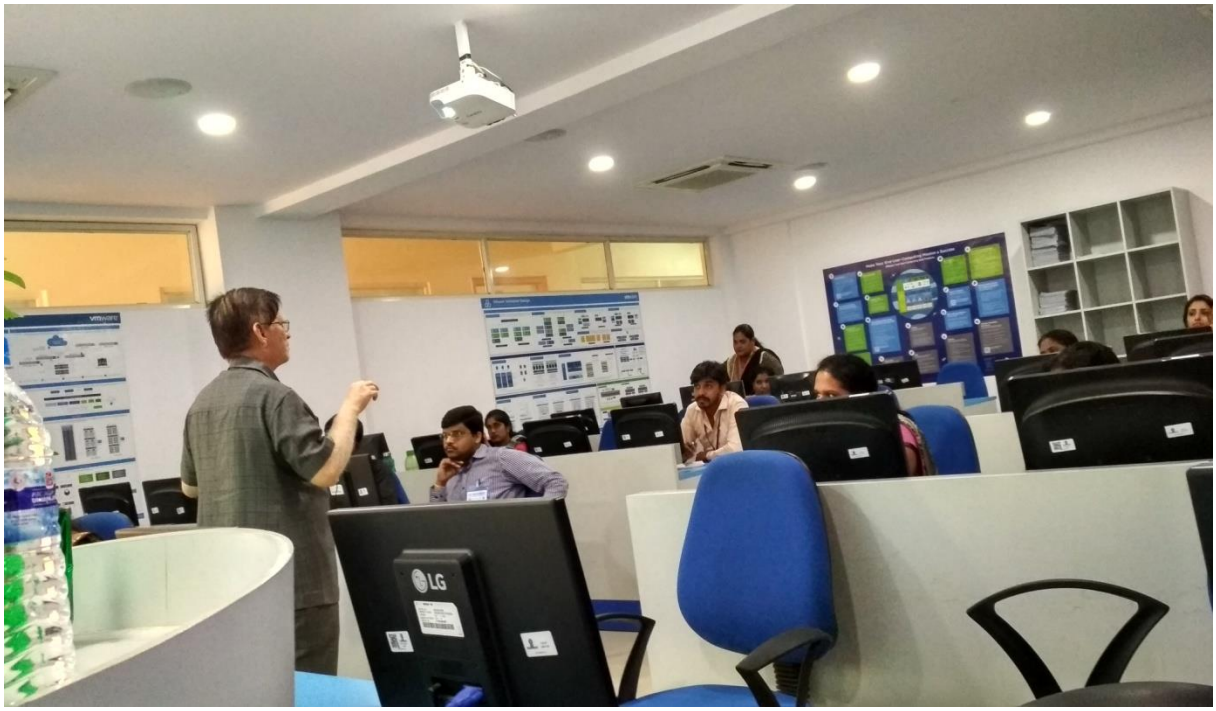
Key highlights of the talk were:

- Working principle of Optical Sensors.
- Discussion on UltraSonic Sensor and CO_2 Gas Sensor.
- Plam print and vein multibiometric authentication using gabor.
- Interactive discussion about Weather Monitoring System For Forest Fire Detection using IoT.
- Display of under gfault distance IoT using gsm round cable.

Various sessions throughout the Training

Dr. Jitendranath Mungara, HOD-ISE, Presenting Sapling to Dr. T. R. Ganesh Babu, Speaker of the Session.

Dr. T. R. Ganesh Babu delivering the talk on Sensor Networks and IoT.



Speaker Interacting with the Participants

Session was informative and participants shown keen interest and enthusiasm.

Report prepared by:

Mrs. Shwetha K S,
Dept. of ISE.

Report ------- Information and Network security

Date: 23.12.17 **Time**: 01:30pm to 03:30pm

Talk on "**Information and Network security"** was delivered by Mr. Veda Balan R, Sr. Principal Member of Technical Staff, [24/7] Customer Pvt. Ltd., Bangalore and Mr. Vinay Urs Devaraja, Product Security Manager, [24/7] Customer Pvt. Ltd. , Bangalore.

The talk started with IoT Experiences and IoT Usecases. Further the talk progressed with goals of information security.Session also extended for areas of security. The talk was very interesting and knowledgeable. Finally, the talk was successfully ended up and faculty members shared their experiences and views about the sessions through Feedback.

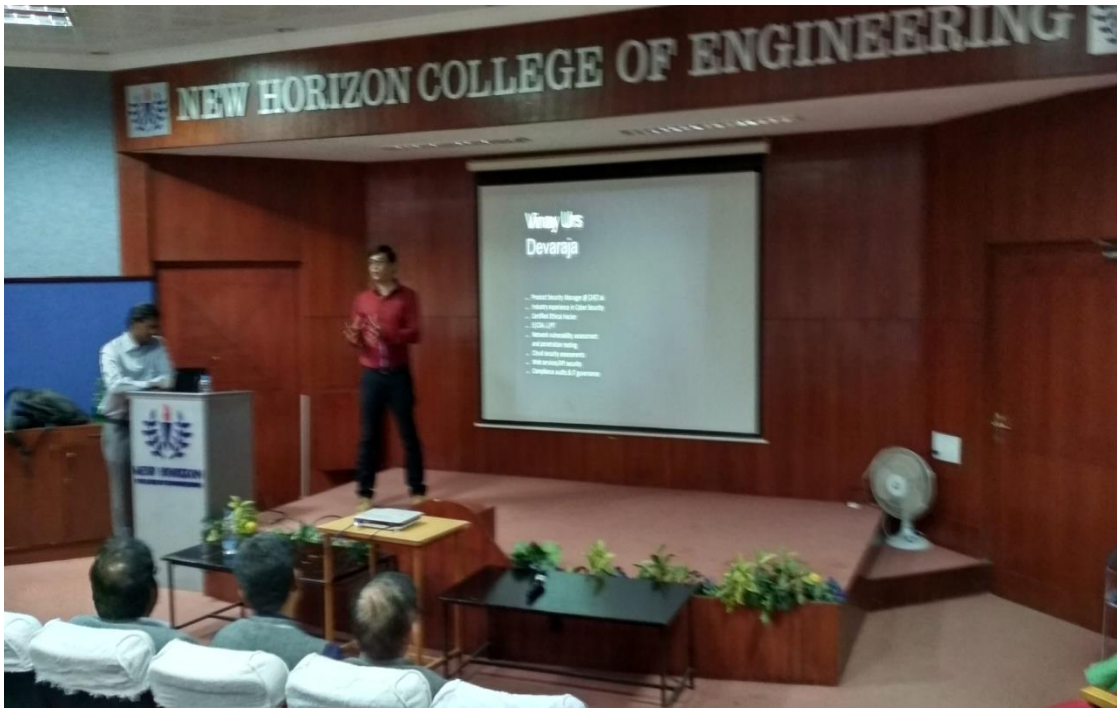
Key highlights of the talk were:

- Discussion on SDLC and Security first architecture.
- Brief explanation about Data characteristics and vulnerability.
- Interaction on Electronics vulnerabilities and Social Science vulnerabilities.
- Importance of securing network ports and variety of free network scanning tools.
- Knowledge Sharing on Google Hacking Database.
- Network Security assessment approach and process
- Network assessment Open Source tools and Commercial tools.

Various sessions throughout the Training

Dr. Jitendranath Mungara, HOD-ISE, Presenting Sapling to Mr. Veda Balan R and Mr. Vinay Urs Devaraja, Speakers of the Session.

Mr. Veda Balan R delivering the talk on Information and Network security.



Mr. Vinay Urs Devaraja delivering the talk on Information and Network security.

Session was informative and participants shown keen interest and enthusiasm.

Report prepared by:

Mrs. Shwetha K S,
Dept. of ISE.

New Horizon college of Engineering
Department of information Science and Engineering

Two-Week AICTE Sponsored Technical Faculty Development Programme
on
Research Frontiers in Advanced Networking, Security and Internet of Things-A Tool Driven Approach
11th to 23rd December 2017

CONSOLIDATED PARTICIPANTS DETAILS

Sl. No	Name	Participant's Details	Phone	Email
1.	Archana H	Assistant Professor, CSE,HKBK College of Engineering Bangalore	9739522930	archanahv.cs@hkbk.edu.in
2.	AmreenKhanam	Assistant Professor, CSE, HKBK College of Engineering Bangalore	9164892322	amreen8730@gmail.com
3.	Manjula H T	Assistant Professor, CSE, HKBK College of Engineering Bangalore	8884878969	manjulaht.cs@hkbk.edu.in
4.	PriyaRathod	Assistant Professor, CSE, HKBK College of Engineering Bangalore	9886599055	priyarathod.cs@hkbk.edu.in
5.	Noor E Saba	Assistant Professor, CSE, HKBK College of Engineering Bangalore	9535107374	nooresaba.cs@hkbk.edu.in
6.	Bhagya K	Associate Professor, CSE, HKBK College of Engineering Bangalore	9901190979	bhagkris@gmail.com

7.	SufiaBanu	Assistant Professor, ECE, HKBK College of Engineering Bangalore	9844567828	sufiabanu.ec@hkbk.edu.in
8.	Savithri Ramesh	Assistant Professor, ISE, HKBK College of Engineering Bangalore	9844228210	savithrir.is@hkbk.edu.in
9.	HeenaKouser Gogi	Assistant Professor, ISE, HKBK College of Engineering Bangalore	9844778486	heena.is@hkbk.edu.in
10.	Asghar Pasha	Assistant Professor, ISE, HKBK College of Engineering Bangalore	9845001580	zoh05asg@gmail.com
11.	Sharavana K	Associate Professor, ISE, HKBK College of Engineering Bangalore	9902054977	sharatanuj@gmail.com
12.	Zahira Tabassum	Associate Professor, ECE, HKBK College of Engineering Bangalore	9916701624	zahtrat.ec@hkbk.edu.in
13.	Chaithra	Associate Professor, CSE, Sapthagiri College of Engineering Bangalore	9632180379	chaithra@sapthagiri.edu.in
14.	Ramya R	Assistant Professor, ISE,Sapthagiri College of Engineering Bangalore	8884816537	ramyar@sapthagiri.edu.in

15.	Divyashree G	Assistant Professor, ISE,Sapthagiri College of Engineering Bangalore	7760860352	divyashreeg@sapthagiri.edu.in
16.	Tejaswini B S	Assistant Professor, ISE,Sapthagiri College of Engineering Bangalore	8147109717	tejaswini@sapthagiri.edu.in
17.	Sanjay K N	Assistant Professor, Bapuji Institute of Engineering & technology	9738120372	sanjayspartan@gmail.com
18	Puneeth S P	Assistant Professor, ISE Bapuji Institute of Engineering & technology	9964667740	punithshetty8@gmail.com
19.	Vani V G	Assistant Professor, Govt. Engineering College, Kushalnagar	9482632152	vanivg@gmail.com
20.	Gopala J	Assistant Professor, Dept. of physics Govt. Engineering College, Kushalnagar	9844016220	jgopal977@gmail.com
21.	Bhagyamma S	Assistant Professor ECE, Govt. Engineering College, Kushalnagar	9448735425	bhagya_tnpur@yahoo.co.in
22.	Geetha H R	Assistant Professor ME, Govt. Engineering College, Kushalnagar	8904479703	geethagmb@gmail.com

23.	Sri Harsha A M	Assistant Professor ME, Govt. Engineering College, Kushalnagar	9164589826	sriharsha.am@gmail.com
24.	Karibasappa R	Assistant Professor EC, Govt. Engineering College, Kushalnagar	9480664254	karibasappa2010@gmail.com
25.	Pavithra N	Assistant Professor Maths, Govt. Engineering College, Kushalnagar	9743045390	pavithralochan2012@gmail.com
26.	Dr. Suresha M S	Assistant Professor, Dept. of Chemistry, Govt. Engineering College, Kushalnagar	8722169049	drsoory76@gmail.com
27.	Mamatha R	Assistant Professor, Department of E& C, Govt.SKSJTI, K.R. Circle, Bangalore	8971788999	mamathasairam@gmail.com
28.	Anooja Ali	Assistant Professor, Reva University, Bangalore	8050779104	anoojaali@gmail.com
29.	LaxmiJayannavar	Assistant Professor,Reva University, Bangalore	8971533373	laxmijayannavar@reva.edu.in

30.	Supreeth S	Assistant Professor,Reva University, Bangalore	9738359739	supreeth1588@gmail.com
31.	Shruthi G	Assistant Professor, Reva University, Bangalore	9591235901	shruthig@reva.edu.in
32.	Nirmala S Guptha	Associate Professor, Reva University, Bangalore	9845113174	nirmalaguptha@reva.edu.in
33.	Ambika B J	Assistant Professor, Reva University, Bangalore	9741985366	ambikabj@reva.edu.in
34.	Anitha K	Assistant Professor, Reva University, Bangalore	9731768228	anithak@revainstitution.org
35.	Chandrika M	Lecturer BMS College for Women, Bangalore	9538343958	muralichandrika@gmail.com
36.	Rajani Chetan	Assistant Professor, ISE, Maharaja Institute of Technology, Mysore	8073690099	rajanichetan89@gmail.com
37.	Hemavathi M S	Assistant Professor, ISE, Maharaja Institute of Technology, Mysore	9164133447	hemavathimn_ise@mitmysomi.in
38.	Amruth V	Assistant Professor, ISE, Maharaja Institute of Technology, Mysore	9986984142	ammuabhi.a@gmail.com

39.	Shwetha S Shetty	Assistant Professor, ISE, Maharaja Institute of Technology, Mysore	8105869558	shwethashetty19@gmail.com
40.	Suganya	Assistant Professor,ISE The Oxford College of Engineering, B'lore	7899004562	suganyadurga@gmail.com
41.	Sindhuja R	Assistant Professor,ISE The Oxford College of Engineering, B'lore	8861229066	sindhu.muthu@gmail.com
42.	Karthik N L	Assistant Professor,ISE The Oxford College of Engineering, B'lore	9886622862	karthiktoce@gmail.com
43	Kokila P	Assistant Professor,ISE The Oxford College of Engineering, B'lore	9787641047	kokilaparamanandam@gmail.com
44	Hemalatha K L	Prof. & HOD, ISE, Sri Krishna Institute of technology, Bangalore	9663324278	hema.skit@gmail.com
45	Manjula K	Assistant Professor, ISE, Sri Krishna Institute of technology, Bangalore	9538161888	manjukarur@gmail.com
46	Naveen S	Assistant Professor, CSE, The Oxford College of Engineering, B'lore	9964559313	naveen061.hs@gmail.com

47	Senthil Kumar	Assistant Professor, CSE, The Oxford College of Engineering, B'lore	9343354882	senkr.rai@gmail.com
48	Devaraju B M	Assistant Professor, CSE, RNS institute of technology, Bangalore	9620849034	devarajubm@gmail.com
49	Sanjay P K	Assistant Professor, CSE, RNS institute of technology, Bangalore	9916069451	sanin009@yahoo.com
50	Mrs.Sreeja S P	Senior Assistant Professor MCA, NHCE	9845731242	sp_sreeja@yahoo.com
51	Mrs.Nithya R	Senior Assistant Professor, MCA, NHCE	9740815775	nithya.boopalan@gmail.com
52	Mrs.Jincy C Mathew	Assistant Professor. MCA, NHCE	9886962700	jincy26101984@gmail.com
53	Dr. V Asha	Associate Professor, MCA, NHCE	9448950679	asha.gurudath@gmail.com
54	Mr. Gangadhar Immadi	Senior Assistant Professor, ISE, NHCE	9986789040	immadi.gangadhar@gmail.com

55	Mrs Vandana C P	Assistant Professor, ISE, NHCE	9945721293	vandana.hareesh@gmail.com
56	Mrs. Mounica B	Senior Assistant Professor, ISE, NHCE	7406179464	premkumarmounica@gmail.com
57	Mrs. Shobha M S	Senior Assistant Professor, ISE, NHCE	8867544828	reach2shaobhamahe@gmail.com
58	Mrs. Kavitha K K	Assistant Professor, ISE, NHCE	9742029131	kavithagowda09@gmail.com
59	Mrs. Preethi J D	Assistant Professor, ISE, NHCE	9731519352	preethijd03@gmail.com
60	Mrs.Shwetha K S	Assistant Professor, ISE, NHCE	9741999766	shwethaise.nhce@gmail.com
61	Mrs J Karthiyayini	Senior Assistant Professor, ISE, NHCE	9731521707	jkarthi781@gmail.com
62	Mr. Vishwajith M V	Assistant Professor, ISE, NHCE	9686931447	vishwajith.rss@gmail.com

63	Dr. Kavitha J	Assistant Professor, Dept. of Basic sciences, NHCE	9449250181	kavijossea@gmail.com
64	Mr A B Madhu Mohan Raju	Assistant Professor, Dept. of Basic sciences, NHCE	9441035789	raju.madhuab@gmail.com
65	Mrs. Padma Priya D D	Assistant Professor, Dept. of Basic sciences, NHCE	9449271414	padmapriyadesai@gmail.com
66	Sudhir Patel	Assistant Professor, Dept. of Basic sciences, NHCE	9886443540	sudhirfriends@gmail.com
67	Mrs Asha K	Assistant Professor, Dept. of Basic sciences, NHCE	9972185142	ashajanavin@gmail.com
68	Mrs A Rafega Beham	Senior Assistant Professor, ISE, NHCE	8553185269	rafeeka.rifa@gmail.com
69	Mrs. Swathi B	Senior Assistant Professor, ISE, NHCE	9620681234	basawarajuswathi@gmail.com
70	Mrs.Kavitha S N	Assistant Professor, MCA, NHCE	9916317063	kavijadhav86@gmail.com

71	Dr. Sreenivasa G	Prof. & Head, -Mathematics, Dept. of Basic Science and Humanities, NHCE, NHCE	9449817583	gsrinivasa1974@gmail.com
72	Ms. Sheba Pari	Assistant Professor, CSE, NHCE	9480526218	shebapn@gmail.com
73	Ms. Kundhavai K R	Assistant Professor, CSE, NHCE	9900620671	kundhavai@gmail.com
74	Ms.Soja Rani S	Assistant Professor, CSE, NHCE	9482598037	soja.naveen@gmail.com
75	Mr. S Heyshanthini Pandiyakumari	Assistant Professor, CSE, NHCE	9944161017	shanthininhce@gmail.com
76	Mr. Niranjan Kumar	Assistant Professor, CSE, NHCE	9535199213	niranjankumar213@gmail.com
77	Mr. Santosh	Assistant Professor, MBA,NHCE	Yet ro be Furnished	Yet ro be Furnished
78	Mr. Tejas	Assistant Professor, MBA,NHCE	Yet ro be Furnished	Yet ro be Furnished
79	Dr. S Sujitha	Senior Assistant Professor, EEE, NHCE	9066259853	prof.sujitha@gmail.com

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of *HKBK College of Engineering Bangalore* has Participated in Technical Faculty Development Programme from 11th December to 23rd December 2017 at New Horizon College of Engineering, Bangalore

Dr. S. Mohan Kumar Organizing Secretary	Dr. Prashanth C.S.R Dean Academics & HOD - CSE Organizing Chair	Dr. Manjunatha Principal & Programme Chair