

NEWS LETTER

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VIMAL JYOTHI Engineering College

Department of
Computer science
and Engineering

Bi-monthly News Letter

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VISION

To contribute to the society through excellence in scientific and knowledge-based education utilizing the potential of computer science and engineering with a deep passion for wisdom, culture and values.

MISSION

To promote all-round growth of an individual by creating futuristic environment that fosters critical thinking, dynamism and innovation to transform them into globally competitive professionals.

To undertake collaborative projects which offer opportunities for long-term interaction with academia and industry.

To develop human potential to its fullest extent so that intellectually capable and optimistic leaders can emerge in a range of professions.

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Oruvattam Koodi - 2016

To take a walk down the corridors of nostalgia, the first Alumni Meet of Vimal Jyothi Engineering College Oru vattam koodi -2016 was held on September 10 at Variakatt hall . Ms. Laly James,HOD EEE welcomed the gathering. . Principal Mr.Benny Joseph delivered the presidential address. Respected Chairman , Rev.Dr.fr. Thomas Melvattom lightened the Lamp . The event

was felicitated by Rev. Fr.Jinu Vadakkemulanjinal (Administrator, VJEC),Rev.Fr George Asarikunnel (Bursar VJEC) and Mr.Sebastian Puthanpurakkal (PRO VJEC) . Mr Manoj V Thomas ,HOD CSE ex-pressed the Vote of Thanks . Around hundred Alumni member together with their family attended the event .The annual alumni meet re-connected the esteemed alumni with their Alma Mater. It let them relive the carefree days of their college lives as they get a chance to visit all the locations they once frequented. They shared their memories and experiences in and Cultural events were also conducted.



Primer to IoT

Internet of Things is considered to be the most important technology of our times. It is expected that by the year 2020 , 50 Billion devices across the globe will be connected to the internet and it is expected to be a \$19 trillion industry. Home Automation too is getting influenced by IoT. In such a scenario, in-order to make the students aware of the IoT Concepts and basic implementation Department of CSE organized a 2 days workshop on IoT on 16th and 17th of August 2016 at ACRC LAB . Two eminent Resource persons Mr. Syed Md Asdaur Rahman and Mr. Ammar Faris both are from Innovians Technologies ,New Delhi , handled the hands-on sessions on Home automation based on Android and Aurdino. The areas covered by workshop include introduction to Arduino , Sensors, Android phone Interaction, Social network interaction and cloud uploading of data. Students got a nice introduction to the area of lot.



Onam Fest-2016

There is a saying that "life is sweeter when we have a collection of happy moments". College life is a blend of many sweet and sour moments which will add colour in a student's life. Such a moment of happiness was evident in the face of students during the ONAM celebration 2016, making their bond of friendship stronger. ONAM was celebrated in a grand manner for two days, 9th and 10th Sept 2016. Mr. Manoj V Thomas, Assoc. Proff & HOD CSE, coordinated the ONAM celebrations of KTU students and Mr. Jomy Jose, Assoc. Proff ASH, coordinated the same for KANNUR UNIVERSITY students. Traditional events of ONAM such as VADAMVALI, POOKALAM, URI ADI etc added colours for the celebrations. The management authorities delivered the message of ONAM and marked the beginning of the event. The main guest of the day MAVELI blessed the people by making his appearance during



the closure of the day. The students parted for ten days' vacation by wishing each other a very happy and prosperous ONAM. Hiring the words of Oprah, "the more you praise and celebrate your life, the more there is in life to celebrate", let there be more celebrations in future which will add more sweeter memories to their life

AI to New Levels...

Imagine if you could get better at some skill not just by learning and practicing it, but by accessing the brains of others to tap directly into their experiences? For humans, that's still science fiction, but in the field of AI-powered robotics, it is possible to shortcut training times by having robots share their experiences. Google demonstrated this recently with its grasping robotic arms.

Google Research, its UK artificial intelligence lab, DeepMind, and Google X are also continuing to explore cloud robotics to accelerate general-purpose skills acquisition in robots. In several demonstration videos published on Tuesday, Google shows robots using shared experiences to learn rapidly how to push objects and open doors.

One of three multi-robot approaches the researchers are using is reinforcement learning, or trial and error, combined with deep neural networks. That is the same approach DeepMind has used to train its AI to master Atari video games and Chinese board game Go.

Each robot has its own copy of a neural network that helps it decide optimal actions to open the door. Google builds up data more quickly by adding interference. A central server is also recording the robots actions, behaviors and final outcomes and uses those experiences to build a better neural network that helps the robots improve at the task.

Another method they're exploring might help robots follow commands to move objects around the house. Here, Google is teaching its robots to build mental models about how things move in response to certain actions by building up experience of where pixels end up on a screen after a taking a certain action.



To be Continued over Page 4...

Beware of Ransomwares

Imagine what would happen if you were stopped from accessing your own files or accessing your own computer system. Now imagine further if to get back the access someone demanded ransom amount from you. Globally increasingly social interactions and financial transactions involve few critical aspects such as digital data, computing device and the internet. This is an area where Ransomware has spread and become a major concern against digital extortion in the form of a new age threat vector to corporates and end users alike.

Ransomware is malware that typically enables cyber extortion for financial gain. Criminals can hide links to ransomware in seemingly normal emails or web pages. Once activated, ransomware prevents users from interacting with their files, applications or systems until a ransom is paid, typically in the form of an anonymous currency such as Bitcoin. Ransomware is a serious and growing cyber threat that often affects individuals and has recently made headlines for broader attacks on businesses. Payment demands vary based on targeted organizations, and can range from hundreds to millions of dollars.

Once infected, a victim has little recourse. If they do not pay the ransom, they suffer business down time, loss of sensitive information or any other penalty specified by the attacker. And even when they do pay the ransom, they remain vulnerable to attack from the same attacker or a new one, and reward attackers for their successful tactics.

Ransomware infection spreads across through many methods including Traffic Redirection, Email attachment, Botnets and Social Engineering, Ransomware as a Service. Top Ransome are Ransom:HTML/Tescrypt.E Ransom:HTML/Tescrypt.D, Ransom:HTML/Locky.A, Ransom:Win32/Locky, Ransom:HTML/Crowti.A, Ransom:HTML/Exxroute.A, Ransom:Win32/Cerber.A, Ransom:JS/FakeBsod.A Ransom:HTML/Cerber. A Ransom:JS/Brolo.



Placement Training

In order to make the S7 CSE Students capable of facing placement drives Department of CSE Organized a 2 days Training session in Association with Baabtre, a Kozhikode Based Development and Training firm on 30th September and 1st October. Three Resource persons handled sessions for improving the aptitude skills of Students. The main areas related with technical interview were discussed.

Mock tests and interviews were conducted and the results were discussed so as to identify the weaker students to provide them special training. Latest trends and technologies in the field of computer science were discussed so as to identify the new job areas in computer science.

Students got a realistic experience of participating in a placement drive. The confidence level also got boosted.

PEO's of Department

- I. Graduates will achieve broad and in-depth knowledge of Computer Science and Engineering relating to industrial practices and research to analyze the practical problems and think creatively to generate innovative solutions using appropriate technologies.
- II. Graduates will make valid judgment, synthesize information from a range of sources and communicate them in sound ways appropriate to their discipline.
- III. Graduates will sustain intellectual curiosity and pursue lifelong learning not only in areas that are relevant to Computer Science, but also that are important to society.
- IV. Graduates will adapt to different roles and demonstrate leaderships in global working environment by respecting diversity, professionalism and ethical practices.

Inside the Department

- PTA Meeting Of the Third Semester CSE was held on 23/09/2016
- PTA Meeting Of the First Semester CSE was held on 01/09/2016
- PTA Meeting Of the Seventh Semester CSE was held on 23/08/2016
- Free GATE Coaching for the CSE Students has been conducting in the department at evening sessions , Co-ordinated by Ms. Ancy K Sunny
- KTU External Audit was conducted on 4th October 2016

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This time the robots share their experiences of nudging different objects around a table, helping them predict what might happen if they take a certain course of action.

Finally, the researchers are exploring ways for robots to learn from humans. Google's researchers guided robots to the doors and showed exactly how to open them. These actions were encoded into a deep neural network that converts camera images to robot actions.

Again, post-human training, the robots shared their experiences after attempting to open the door themselves. Also, by gradually changing the position of the door with each attempt the robots were able to gradually improve at the task, helping them become more versatile within few hours.

Editorial Board

Staff Support:

Mr. Sunder V
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POs and PSOs of Department

Engineering Graduates will be able to:

1. **Engineering Knowledge:** Apply the knowledge of mathematics, science, engineering Fundamentals, and an engineering specialization to the solution of complex engineering problems.
2. **Problem Analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
3. **Design/ Development of Solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
4. **Conduct Investigations of Complex Problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
5. **Modern Tool Usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
6. **The Engineer and Society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
7. **Environment and Sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
8. **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
9. **Individual and Team Work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
10. **Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
11. **Project Management and Finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
12. **Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

PROGRAM SPECIFIC OUTCOMES (PSOs)

1. An ability to apply development principles to analyze and design complex software and systems containing hardware and software components of varying complexity.
2. An ability to apply mathematical foundations, algorithmic principles, and computer science theory in the modeling and design of computer-based systems in a way that demonstrates comprehension of the trade-offs involved in design choices.