VOLUME 5: ISSUE: 4

SMRITI

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

SNEAK PEEK

HOD'S DESK

As we approach the end of another academic year, it feels wonderful to look back and take stock of the significant happenings during the past 3 months.

The unique opportunity of hosting the grand finale of Smart India Hackathon was a wonderful experience. It was a pleasure watching all 58 teams intensely working on their problems continuously for 36 hours. Interacting with eminent people from IT industries and representatives from the Ministry of earth sciences was also very enjoyable and productive. It was heart-wrenching that one of our teams which came in top 8 did not eventually win a prize due to an unfortunate lapse.

Among the teams which went to other nodal centres, the team led by Adithya won 1st prize in Chandigarh and the team led by Muthu Annamalai won 3rd prize in Jaipur. Congratulations to both the teams. My special appreciations to our 2016 alumni who mentored these teams.

I highly commend Thirumla Devi, Vrithika and Rhea for winning the ACM CodHER hackathon. My appreciations to Sri Raghav for winning the Best outgoing student award. It is also commendable that he along with Vijayaraghavan and Shriram won the best paper award on the Undergraduate Students Research Day.

I congratulate all the students who are heading to various prestigious universities abroad for their higher studies. The total number of admits has increased compared to the past years. My best wishes to all graduating students for a bright future.

My best wishes to the third year students who will be pursuing prestigious internships at Google, USA and Amazon, Chennai.

It was a proud moment for the department when the research work done by our alumnus Satish Palaniappan along with an IMSc professor on "Reading the Indus Script using Deep Learning" was featured in several leading newspapers and magazines.

There were three workshops conducted in the area of Bioinformatics, Latex and Research Methodologies. The Project Colloquium conducted by CSI also received good response. I would like to compliment all the organizers for their sincere efforts.

Our interaction with Vimana Technologies Private Ltd. has culminated in signing an MoU with them. We have started pursuing some interesting collaborative research work with them.

Coming academic year onward, an additional intake of 60 has been approved by AICTE for the undergraduate degree in CSE. Let us strive hard in maintaining the highest quality while the department expands.

Our next task of obtaining the highest grade in NAAC accreditation awaits us. Hope we all will rise to that

Dr.Chitra Babu
HoD/CSE

FACULTY PUBLICATIONS

1. **R. Priyadharsini, Dr. T. Sreesharmila, Dr. V. Rajendran**, "Acoustic image enhancement using Gaussian and laplacian pyramid – a multiresolution based technique", ***Multimedia Tools and Applications***, February 2017, Springer, DOI 10.1007/s11042-017-4466-7, (Thomson Reuters, Indexed IF:1.33), ISSN: 1573-7721.

2. **Nancy. P, R.Geetha Ramani, Shomona Gracia Jacob**, "Explorations on Influential node Identification and Gender Prediction in Dolphin Network through Social Network Analysis", ***Asian Journal of Research in Social Sciences and Humanities***, Vol.7(2), pp.331-352, February, 2017. DOI:10.5958/2249-7315.2017.00094.6.

3. **Dr. B. Bharathi, G. Sridevi, G. J. Varshitha**, "Recognizing and retrieving the meaning of thirukkural from speech utterances", in ***Proceedings of International conference on Signal processing, communications & Networking***, Madras Institute of Technology campus, Anna University, Chennai. 16-18th March 2017, (To appear in IEEE Explore). Received Best paper award.

4. **Dr.Shomona G Jacob, Ms.Y.V.Lokeswari** "Categorizing Distinct Carcinoma from Gene Expression Data using Multi-Layer Perceptron", in ***Proceedings of the International MultiConference of Engineers and Computer Scientists,*** *2017*, Vol I, IMECS 2017, March 15 - 17, 2017, Hong Kong.

5. **Dr.Shomona G Jacob, K.Tejeswinee**, "Investigation on the Effects of Protein Sequence Properties in Alzheimer's and Parkinson's Disease", *in* ***Proceedings of the International MultiConference of Engineers and Computer Scientists,*** 2017 Vol I, IMECS 2017, March 15 - 17, 2017, Hong Kong.

6. **Ms. B. Prabavathy, H. Kaveitha**, "Survey on technical challenges for the implementation of smart meter system" in ***Proceedings of the International conference on Knowledge Discovery and Computational Intelligence***, Vel's University, 9 & 10 March, 2017.

7. **Poornima N, Shomona Gracia Jacob**, "Social influence algorithms and emotion classification for Prediction of Human Behavior: A Survey", **in Proceedings of the Second International Conference on Recent Trends and Challenges in Computational Models**, 2017, pp.55-60.

FACULTY ACTIVITIES

Meetings Attended

1. **Dr. Chitra Babu attended the Board of Studies meeting at Anna University for finalizing the R-2017 curriculum and syllabi for 1st year courses.**
2. **Dr. Chitra Babu participated in the Second Leadership Conclave that was organized by Shiv Nadar Foundation.**

3. **Dr. G. Raghuraman acted as Expert Member representing the Foreign Examiner for Ph.d Viva Voce of Ms. Nikkath Bushra, at Bharath University on 22 March, 2017.**

Invited talks

4. **Ms. K. Lekshmi delivered a hands-on session on Handwritten digit recognition using Convolutional Neural Networks in python in "Workshop on Machine Learning Techniques for Image Based Applications", organized by Department of Information Technology, SSN College of Engineering, during 9 - 10 February, 2017.**

5. **Ms. A. Beulah has conducted a hands-on session on Object detection using Cascade Classifier in MATLAB in "Workshop on Machine Learning Techniques for Image Based Applications", organized by Department of Information Technology, SSN College of Engineering, during 9 - 10 February, 2017.**

6. **Dr. B. Bharathi delivered a lecture on "Compiler Design" to the students of IT department at Jerusalem College of Engineering, Chennai on 15 February, 2017.**

7. **Dr. R. Kanchana delivered a lecture on "Preparation of Journal article / report using Latex" in IEEE/CSI student chapter workshop on LaTex on 11 February, 2017.**

8. **Dr. T. T. Mirnalinee delivered a talk on "Fundamentals of Image processing and Machine learning Algorithms" in the two day workshop on Machine Learning Techniques for Image Based Applications, organized by IT Dept of SSNCE.**

Projects Reviewed

9. **Dr. R. Kanchana reviewed projects under Big Data category, for CSI project colloquium 2017 organized by Department of CSE, SSNCE on 22 March, 2017.**

10. **Dr. P. Mirunalini reviewed projects for CSI project colloquium 2017 organized by Department of CSE, SSNCE.**

11. **Dr. D. Thenmozhi reviewed projects for CSI project colloquium 2017 organized by Department of CSE, SSNCE.**

External Interaction

12. **Dr. Jaisakthi, Dr. P. Mirunalini and Dr. C. Aravindan have participated and submitted a task titled "Skin Lesion Segmentation using Semi-supervised Learning" conducted by International symposium on Biomedical Imaging 2017.**

13. **Dr. P. Mirunalini, Dr. C. Aravindan, Dr. Jaisakthi and G. Vignesh have participated and submitted a task titled "Skin Lession classification using Deep learning" conducted by International symposium on Biomedical Imaging 2017.**

Awards Received

Dr.A.Chamundeswari, Professor/ CSE, received the Longest Continuous SBC award from Computer Society of India.

Dr. S.Kavitha, received the award from Venus International Foundation for Outstanding Woman in Engineering 2017.

Dr.Shomona Gracia Jacob, received the Young Woman In Engineering Award, 2017 from the Venus International Foundation.

Projects Submitted For Funding From External Agencies

DST – ICPS – SCHEME

Ms. B. Prabavathy *and* ***Dr. Chitra Babu*** *submitted a project titled "SmartFW: A Big Data application framework for smart meter data processing" for possible external funding to the tune of Rs. 28.22 Lakh.*

Dr.R.Kanchana, PI and Dr. V.S.Felix Enigo along with Dr.T.T.Mirnalinee ,CO –PIs *submitted a project titled "Smart Sewer Pipes (S2P): Detection of Pipe Leakages & Blockages and Prevention of Sewer Sump Overflows" for possible external funding budgeted at 29.38 Lakh.*

INDUSTRY – INSTITUTE INTERACTION

As part of Consultancy project for the year 2016-2017, four projects titled

(i) Porting Windows 10 to Raspberry Pi
(ii) Kernel Optimization
(iii) Re-engineering wheel balancer application
(iv) Wheel Alignment

were implemented successfully with Manatec Electronics Ltd. Mr.R.Thirumavalavan, Senior DGM, R&D along with Mr.J.Jayachandran, Senior Manager, Software Division, Manatec, visited the Department of CSE on 21 April, 2017 to review the work. The members appreciated the work done by the students and issued certificates for the completed projects.

Dr. Chitra babu and Dr. T. T. Mirnalinee, discussed with the Manatec Electronics leadership regarding potential research problems to collaborate on, during the coming academic year.

1. ***Dr. Chitra Babu*** arranged an internship opportunity for our third year students at TCS innovation lab. Among the interested students, five students Sivagami, Simran Modi, Ramya P, Priyanka Bhaskar and Aparna were shortlisted and attended the interview. SN Sivagami has been selected for the internship.

2. ***Dr. Chitra Babu, Dr.T.T.Mirnalinee*** & ***Ms. B. Prabavathy*** have visited Caterpillar Inc. along with the III year students Arjith Natarajan and Abhay for demonstration of the project "Improving data visualization strategy for visualizing historical data" to a team in CAT. They also discussed possible projects for collaboration during the coming academic year.

3. ***Dr. Chitra Babu***, ***Dr. T.T. Mirnalinee*** and ***Mr.V. Balasubramanian*** coordinated the Manufacturing Day Business Fair Event of Tech Mahindra, wherein the Department of CSE exhibited 7 projects during Jan 30 to Feb 1, 2017.

4. ***Dr. T.T.Mirnalinee*** and ***Dr. D. Thenmozhi*** organized a meeting with Access Health Care IT incharge for demonstrating faculty and students projects as part of consultancy activity.

5. ***Dr. R. Kanchana*** and ***Dr.V.S.Felix Enigo*** attended "Tech Fiesta 2017" – Capgemini's technology networking event on April 10th, 2017 at SIPCOT, Chennai.

6. ***Dr. T. T. Mirnalinee*** attended a meeting with Mr. Manoj Raghavan, Executive Vice President and Head of Embedded Product Design, Tata Elxsi, along with Mr. Krishnan, HR, Tata Elxsi, Dr. S. Radha, Head/ECE, Dr. K. T. Selvan, Prof/ECE, Mr. B. Srinivasan, Director, SSN School of management.

MOU SIGNED

A ***MoU has*** been signed between ***SSN College of Engineering*** and ***Vimana*** Technologies, Private Ltd., which is a group company of the American Aspec Scire Inc., that focuses on drone data analytics.

Dr. Chitra babu, Dr. T. T. Mirnalinee, Dr. P. Mirunalini, Ms. R. Priyadharsini had a discussion with Mr. Krishna Sudarshan, CEO, and Dr. Rangarajan Krishnamoorthy, CTO, of Vimana Technologies regarding the progress of the consultancy project titled ***Photogrammetry – Generation of 3D Panoramic view from 2D images.***

EXTERNAL RECOGNITION

Dr.Chitra Babu, Head of the Department – CSE has been nominated as Vice-Chair of ACM India Chennai professional Chapter, in a chapter meeting that was held on 31 January, 2017 at IIT Madras.

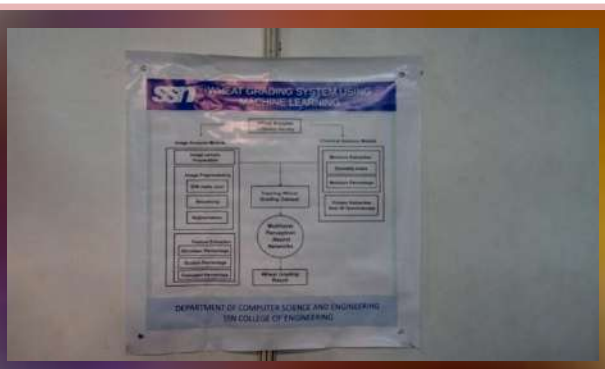
The ACM India Chennai Professional Chapter aims at bringing together computing professionals from both academia and industry in Chennai area. Please check the following link for the Chapter's past and upcoming events.

https://chennai.hosting.acm.org/chennai-acm/

Dr.A.Chamundeswari, Professor – CSE, is a member of Editorial board of Computer Society of India Chennai Chapter News letter, INFOLINE.

TECH MAHINDRA MANUFACTURING DAY BUSINESS FAIR EVENT

The Department of CSE, SSNCE, participated and showcased 7 projects in the **3 day Business Fair event of Tech Mahindra** held during Jan 30 to Feb 1, 2017**.** Many prominent industries and eminent institutes also participated. Our Stall was a great success and was **appreciated by Tech Mahindra clients** and also **by their associates and leadership.** Our innovative projects and bright ideas attracted the interest of many visitors in the event.



PAPER REVIEWS

1. **Dr. Chitra babu and Ms. B. Prabavathy** reviewed a technical paper titled "An Efficient Selective Partitioning based Approach for Maximal Frequent Itemsets Mining" for SADHANA journal.

2. **B. Prabavathy** has reviewed the following papers for the International Conference on Computational Intelligence in Data Science (ICCIDS-2017).
    a. Performance Evaluation of Big Data Frameworks: Map Reduce and Spark.
    b. The Improvement of Cache Replacement Algorithm in P2P Streaming Media System.

3. **Dr. D. Thenmozhi** reviewed 3 papers for the national conference NCTCT'17 organized by Meenakshi Sundararajan Engineering College, Kodambakkam, Chennai.

4. **Dr.S.Saraswathi** reviewed a paper titled “Secure Provenance Scheme for Consecutive Colluding Users Detection in Distributed Networks” for IEEE Access and another paper titled “Advanced lightweight multi-factor remote user authentication scheme for cloud-IoT applications” on request from Information Security journal.

5. **Dr. R. Kanchana** reviewed a manuscript, "Human-Computer Cloud-Based Decision Support in Business Processes: Platform Architecture and Case-Based Analysis," which has been submitted to Advances in Electrical and Electronic Engineering Journal.

6. **Dr. G. Raghuraman** reviewed the following papers for ICBDCC'17, 2017 International Conference on Big-Data and Cloud Computing, Coimbatore April 1st & 2nd, 2017.
    1. Snarfing Attack - A New way of Hijacking Bluetooth.
    2. Architecture of Cloud Service Management for Login user.
    3. Using Internet of Things to Monitor Volcanic Activity.

    All the selected conference articles were published in "Springer - Advances in Intelligent Systems and Computing" (Scopus Indexed).

7. **Ms.S.Angel Deborah** reviewed the following papers for SemEval2017, the 11th International Workshop on Semantic Evaluation:
    a. Bidirectional LSTM with Attention for Message-level and Aspect-based Sentiment Analysis.
    b. A Deep System for Sentiment Classification in Twitter.
    c. A Voting Classification Approach for Twitter Sentiment Analysis.
    d. Tweet Quantification Using Deep Learning Architecture.
    e. Linear aggregation of word embeddings for fine-grained sentiment analysis of financial news.
    f. Sentiment Predictability in Financial Microblogging and News Articles.

    SemEval2017 will be co-located with the 55th annual meeting of the Association for Computational Linguistics (ACL) and will be held in Vancouver, Canada, at the Westin Bayshore Hotel August 3rd and 4th, 2017.

INTERACTION WITH THE OUTSIDE WORLD

Dr. R. Kanchana, Associate Professor/CSE, was invited as a Session Chair in the "INTERNATIONAL CONFERENCE on COMPUTATIONAL SCIENCE AND TECHNOLOGY (ICCST'17)" organized by Department of CSE, Sri Sai Ram Engineering College, Chennai.
The paper presentation session was on the theme "IoT and Android applications" and 12 papers were presented.

Dr. Shomona Gracia Jacob, Associate Professor/CSE, was invited as a Session Chair for a paper presentation session in "IEEE Technological Innovations in ICT for Agriculture and Rural Development, April 7th & 8th 2017", an International Conference organized by Department of IT, Easwari Engineering College, Bharathi Salai, Ramapuram, Chennai, Tamil Nadu.

Dr. D. Thenmozhi was invited as a session chair in National Conference on Trends in Computing Technologies conducted by Meenakshi Sundararajan Engineering College, Chennai.

SMART INDIA HACKATHON 2017

Smart India Hackathon-2017 was launched on November 9, 2016 in New Delhi to harness creativity & expertise of students, build funnel for 'Start up India, Stand up India' campaign, crowd source solutions for improving Governance and quality of life and give opportunity to citizens to provide innovative solutions to India's daunting problems. Government of India (GoI) envisages a Digital India drive to bridge the digital divide in the country. Out of the 7531 ideas received for 598 problems identified by 29 Ministries/ Departments, 1266 ideas had been shortlisted for the Grand Finale. Smart India Hackathon-2017 was the first massive scale hackathon initiative in India.

About 10,000 engineering and management students from across the country worked together to produce digital solutions for these problems in the form of mobile/computer applications and software programmes. Drawn from 29 institutions, those students digitally addressed at least 598 serious problems that people face on day-to-day basis. As many as 29 ministries had submitted their problem statements to the human resource development ministry. Ministry of road transport & highways (MoRTH) topped the tally with maximum 672 problem statements followed by department of defence & production (496) and ministry of railways (488). Ministry of HRD, the event organiser, had 360 problem statements whereas other departments included external affairs, steel, postal services, ISRO, NCPCR, etc. The issues included geo-fencing of airports, online toll collection, smart/intelligent traffic management, cyber attacks, real-time monitoring of teachers' attendance and of cyber attacks, smart drones to make airspace safer and title recognition system for marine animals.

Shortlisted from 42,000 students of 2,183 engineering and management colleges and universities from across India, the students in 1,266 teams worked nonstop for 36 hours to build products based on their ideas across 26 locations in India during the 'Grand Finale' of 'Smart India Hackathon 2017' April 1-2. Multiple prizes worth Rs 50 lakh for students were announced and awarded.

SIH 2017 at SSN

SSN College of Engineering had been selected as one of the twenty six nodal centres across India by the Ministry of HRD/AICTE to organize the Smart India Hackathon on 1 & 2 April 2017. The event was inaugurated by Shri Prakash Javadekar, Hon'ble Minister of HRD, Govt of India (GoI) simultaneously across all the centres. SSN had been chosen to host the teams that were working on projects related to Earth Sciences.

Grand finale at SSN witnessed the participation from 58 teams across India comprising 360 students and over 120 industry mentors. Eight Judges from Ministry were automatically allotted while the four Industry judges were finalized through the efforts taken by Dr.Chitra Babu, HoD - CSE. Dr. Rajesh Jeyaprakash, Innovation Manager, TCS Innovation Labs, Mr. M. Devaraj, Solution Architect, Intellect Design Arena Ltd., Mr. Rajendran Dhandapani, Director of Engineering, Zoho Corporation and Mr. Bharathi Masilamani, Software Development Manager, Amazon were the invited judges. The AICTE coordinator for the entire judging panel was Mr. R. Venkatesh from TRDDC, Pune.

The Hackathon was inaugurated on 1st April morning with the following dignitaries, Honourable Minister of Higher Education, Mr. K. P. Anbalagan, Honourable justice, Ms. Anita Sumanth, Madras High Court and Mr. Lakshmi Narayanan, Vice Chairman, Cognizant. Mr. Lakshmi Narayanan highlighted the need for talented software developers and problem solvers for the country to excel compared to countries such as China and Russia, rather than being complacent about our past edge in the IT domain.

The chief guest for the valedictory function was Dr. Madhavan Mukund, Professor of Chennai Mathematical Institute. In his valedictory address, he emphasized the importance of a good software developer in proactively understanding the requirements of the society and providing good solutions for them. The three winning teams received the prize money of Rs. 1 Lakh, Rs. 75,000 and Rs. 50,000. The winners and other selected teams will be part of the AICTE Start-up scheme, for which they will gain a direct entry to the presentation round to present their idea and business model for funding.

The Department of CSE, SSNCE is proud to record that the winning team at Chandigarh and the second runner-up team at Jaipur comprised of SSN CSE students who were mentored by our very own CSE Alumni.

We believe that this is just a stepping stone towards attaining greater heights in future!

(L-R: Ms.Kala Vijaykumar, Mr.Lakshmi Narayanan, Mr.K.P.Anbalagan, Ms.Anita Sumanth, Mr.R.Srinivasan, Dr.S.Salivahanan)

Ms.Kala Vijaykumar presenting a memento to Prof.Dr.Madhavan Mukund, CMI, Chennai during the valedictory function of SIH, 2017.

It was a great honour to have the Founder, SSN Institutions, Padma Bhushan Shiv Nadar congratulate the winners, mentors, participants and organizers of the Smart India Hackathon, 2017. This interaction was held on April 5th, 2017.

The Organizing Team- SIH, 2017
(L-R: Dr.N.Nallusamy, Ms.K.Madheswari, Dr.Sunita Nair,Mr.Amit Tyagi
Dr.T.Nagarajan, Dr.S.Salivahanan, Padma Bhushan Dr.Shiv Nadar, Ms.Kala Vijaykumar, Dr.Chitra Babu)

The Winning Team at SIH, 2017 – E-Lemonators from Chandigarh
(L-R: Chaaran Sen, Arvind Muthuraman, Jagan Kumar, Kaushik Narayanan, Karthik U, Karishma Ponipas, Adithya J, Saket Ram)

The Third Prize Winners at SIH, 2017 – TechWhiz from Jaipur
(L-R: Aparna A, Anjana S, Dhivya N, Satish Palaniappan, Srivathsa PV, Muthu Annamalai CT, Avinash Bharat, Manish Chandra C)

SIH, 2017 – A GLIMPSE

We were very happy to learn that our HoD chose me Arvind Muthuraman and Chaaran S (Alumni 2012-2016 Batch) to mentor the 6 member team 'E-Lemon-ators', consisting of 3rd year B.E CSE students Jagan Kumar, Kaushik Narayan, Karthik U, Karishma Ponipas, Adithya J and Saket Ram. 'E-Lemon-ators' qualified to the finals of Smart India Hackathon, conducted by the Govt. of India. This competition was held at Chandigarh Group of Colleges, Chandigarh on 1st and 2nd April 2017.

The challenge was to design an application for the chosen topic 'Skill India App' which came under the Ministry of Skill and Entrepreneurship development. Our first interaction with 'E-Lemon-ators' was on 31st March, where we got acquainted with each other. We discussed the problem statement in detail, charted down the core requirements and various implementations through a thorough brain-storming session.

The problem statement presented to us was - At present, Government of India runs various schemes to teach the poor, uneducated and unemployed population: job-skills and become self-employed. Also, the Government of India helps establish training centers to serve the purpose. These schemes accept funds from the citizens, to help accelerate implementation and progress. The process involved for the above activities are scattered and tedious to keep track of.

Our solution - is an android application which acts as a portal and media for different roles (Learner, Trainer, Training Partner, CSR Funds) involved. This application makes the tedious form filling process simple and digitizes the entire process.
The key selling points of our solution are Location search for training centers, Calendar schedules for learners and trainers, Firebase analytics to study skill gap, suggestion of courses for new learners. We implemented all unique functionalities involved with UI/UX that every common man is comfortable with.

The event started on 1st April 2017. At 8 am, mentors from the Ministry counseled our team on the idea, and added few enhancements to our idea. This was to direct everyone in the right path at the very beginning of the competition. As mentors, we divided the development work as well as the presentation work among the team members and constantly monitored their work.
At 8 pm, the first round of review began. The review panel consisted of officials from the ministry. Each team was allotted 7 minutes (4 mins for presentation, 3 mins for Q&A).We managed to impress the panel and received inputs on presenting the idea. We continued with our work overnight.

At 9 am, the next morning, the second round of review began. While the rules were the same, this time the panel consisted of a general user group. We accomplished 80% of our idea and demonstrated the same. The panel rewarded us with good feedback. At 3 pm, we wrapped up work and focused on presenting our application for the final round of review. The panel consisted of technical experts from the ministry.

Out of 40 teams, 8 teams were shortlisted for the next round - Power Judging round. We were all excited as it was considered an achievement by itself.
Each team was given 5 mins time to present their application to a 15-member panel. At the end of presentation, we were greeted by applause from the panel, exclusively for our team. Around 9:30 pm, we were announced as the winners of Smart India Hackathon and awarded cash prize of Rs. 1 lakh.

While the award is mesmerizing, essentially it was an invigorating experience for us – to have contributed to the nation, representing the youth of the country.

-Arvind.M
(Developer-Coda Global)

SIH - Team Experiences

The Smart India Hackathon, 2017 was a tremendous success on so many levels- breaking records in participation, scale, and logistics. Given that it was the first edition, the event saw more than 7000 registrations.

The shortlisted teams were called for the second phase of the Hackathon in 26 cities across the country conducted by each of the ministries who had given the problem statements at several different Nodal Centers, one of which was SSN. This gave me and my team (Rabbit Inc.) even more pride competing for the Title at our college.

The Hackathon kicked off with a grand inaugural function on the 1st of April, at Justice Pratap Singh Auditorium, an event which saw many dignitaries.

Nearly 58 teams from across the nation took part in the Grand finale- each with a unique and innovative solution to some of the problems faced by our nation.

It was indeed a great feeling to watch the youth of our nation work hard to contribute to the nations development in any small as way as possible. The thrill of non-stop 36 hrs of coding, mentoring and judging, was invigorating; the timely mentoring sessions offered by experts in various fields helped us throughout the challenge. Judges from the industry and ministry visited at spaced intervals, validating and evaluating the solutions.

The best part was the live video conference with Honorable Prime Minister, Narendra Modi, who talked about importance of passion towards achieving goals. It was truly surprising to hear the PM talk about current trends in tech like IOT, Augmented Reality and Machine Learning. Our idea was an android application to disseminate real-time data about the ocean and its conditions from INCOIS to the fishermen to aid them in fishing. Our application had in-built feedback mechanisms and gaming features to keep the user engaged. Newer elements like ChatBot and SOS features were an added attraction. All-in- all, the product accumulated a lot of appreciation, insights as well as critical reviews from all the judges and mentors.

The organizers have to be congratulated for their efforts, through which, the entire experience was made comfortable and memorable.

By next day evening, the top 10 teams were shortlisted for a Power judging Round where the teams were asked to present their solution to the panel. Our team was one of them. After the presentations, the judges convened to decide the winners. Following this, the valedictory function took place where the results were announced and the prizes were given.

“Although we didn’t win, the entire experience was exhilarating. We were presented with the opportunity to work with the ministry and perfect our solution for launch. The Hackathon taught us several lessons and left us with a lot of memories that will stay with us for years to come.”

~Arjith N,
III CSE - A

To the team that made it all possible:

BEST OUTGOING STUDENT OF THE DEPARTMENT

Sri Raghav

CSE

"You reap what you sow" – is not a mere saying. It is of course a life truth. The circular on 3rd April had the happy news for me. I was chosen as the Best Outgoing Student of the Computer Science Department. The award was given on 5th April at the College Day function. Every step I climbed to the podium, my excitement levels were on its peak. Because that day I had three reasons to cherish – medals for academic excellence in fifth and sixth semester, Best Outgoing Student of CSE and the Best Volunteer of CSI awards.

A quick recap of things which made me get there……

Two weeks before, I came to know that a student has to fill up an application form for the Best Outgoing Student award. It had several criteria some of which – sports, academic stand, membership in professional bodies, contribution to clubs, publications. I managed to keep an 8.96 CGPA and I had memberships in CSI, ACM and IEEE.

Talking about publications, I really want to mention about Dr. Shomona Gracia Jacob. I would never forget her efforts in motivating me to publish papers in journals and shaping the paper for excellence. I have also worked with Dr.V.S.Felix Enigo, Mr. K. Sarath Chandran and Dr.A.Chamudeswari for my final year project and some journal publications respectively.

Next is my contribution to ACE, CSI, I-Cell chapters and newsletter of the department. As a treasurer of ACE, I was able to join hands with office bearers to organize Invente 1.0 – CSE events. Thanks to Dr.Raghuraman and Mr. Sujaudeen for guiding us throughout the event. Next is the CSI Student Chapter of SSN. I was the joint treasurer and event organizer of CSI and under the guidance of Dr. A. Chamundeswari, we were able to organize many events throughout the year. I was very happy to get the Best Volunteer of CSI award. One other thing I liked to work was the I-Cell Chapter. Organizing talks on a weekly basis was fun. I would thank Dr. S. Sheerazuddin for his help in organizing the events. Last but not the least, I take immense pleasure in telling that I worked as an editor of the newsletter team of the department.

I express my deep gratitude to the Head of the department- Dr. Chitra Babu for her constant support and valuable inputs throughout all walks of my college life. I thank all teaching and non-teaching faculty of the department in helping me to achieve this. I dedicate this success to my parents for their support throughout my life.

Sri Raghav,
Best Outgoing Student CSE
(2013-2017)

CSI Student Chapter
Project Colloquium 2017

CSI student chapter organized a project colloquium event for the various Engineering students in the four domain areas, Text analysis, Bio-medical, Image processing and Big data. Enormous response was received from the student community. Out of 80 project abstracts, using 11 reviewers, 17 project abstracts were selected for poster presentation on 22nd March, 2017.

The chief guest of the program Mr. T. R. Vasudeva Rao, Vice Chairman, CSI Chennai Chapter delivered a talk about CSI activities and Dr. Komathy, Member Committee, CSI Chennai Chapter delivered a talk on research projects.

Following the talk, student poster presentation was judged by 6 teams of judges from Cognizant, Chennai and TCS Digital, Chennai. Best three posters were selected and gift vouchers were presented.

Thanks for the volunteers and participants who contributed to the successful completion of the program. .

SSN CSI Student Chapter

Hearty Congratulations!

Sriraghav K, final year CSE section B received the CSI award 2017 on college day function.
Sriraghav was also selected the 'Best Outgoing Student' of the Department of CSE, 2013 -2017 Batch!

Hearty Congratulations & Best Wishes to Raghav!

My Experience on UG Research Day

Research day of our college was held on March 23, 2017. Guided by, Dr.Shomona Gracia Jacob, Asso.Prof./CSE, our team - Sriraghav, Shriram and Vijayaraghavan, Final year – CSE, had worked on a Database Management approach, since our second year and published our paper titled "Transaction Overhead Reduction by Server Localization in Bank Database Management Systems", in the International Journal of Computer Applications, January 2017. Ours was the last paper that entered into the list of presentations since it was published late January. We had presented our paper in front of a panel of experts in January following our publication in the journal.

The panelists were very impressed that, they arranged for a personal interaction with our President Ms.Kala Vijayakumar who enthusiastically listened to our idea behind the paper and was happy to learn that the idea had been successfully implemented in the bank industry. We were more delighted that the management was hosting lunch for us, students. It was a great experience. We take this opportunity to thank the Management - SSN Institutions, The Principal, Dean Research, HoD – Department of CSE and our beloved guide Dr.Shomona for their support. We were so thrilled to hear that we had won and secured the first place in the presentation and were very happy to receive the award on the Research day.

Vijayraghavan.R & Team,
Final Year – CSE 'B'

The AU-CEG ACM Student Chapter in College of Engineering, Guindy, Anna University organized the third edition of its women's Hackathon-– CODhER. The event was open to girls in any department, year or college, and was a golden opportunity to interact with senior professors and academicians, learn from experts in the industry, and grow along with peers. It took place on 17th March 2017, in the Department of Information Science and Technology, Chennai from 3:00 p.m. It was their first time to introduce a 23 hour Hackathon for girls.

Five teams from SSN participated in this event. Our team included Vrithika , Thirumla Devi and Rhea from third year and were called the nightcoders . We were given an option to either solve or produce an application that was presented to us or we could develop a working application with our own idea. We came up with project THULI. The main focus was towards Water scarcity, as it is one of the major problems in our country. The aim of our project was to systemize water circulation within the metro water zones using user friendly application .This is done with the help of licensed water vendors and metro water suppliers. We used technologies like Android Studio and firebase.

We were given time till next day 3:30 pm to complete our project. We had a progress board which we had to highlight once we were done with respective modules. We were periodically visited by mentors and student helpers who were extremely helpful. They helped us with different issues and provided different perspectives which were valuable to produce good outcome. At the end we had to give a 5 min presentation on our project to all mentors, professors and judges. It was a thrilling experience and we were winners along with two other teams from different colleges.

S.Thirumla Devi, Vrithika & Rhea Marian
3rd year - CSE

Codechef Campus Chapter

We set up the Codechef Campus chapter for our college (MaxFlow) this February under the guidance of Mr. V. Balasubramanian sir. With the Campus Chapter, Codechef allows us to use the Codechef platform for hosting public and private contests and supports the chapter by giving goodies for every contest that we host in their platform.

To inaugurate the chapter, we invited Mr. Anup Kalbalia, tech lead, Codechef. He gave a talk about the status of competitive programming in India. He spoke about ACM ICPC which is considered as the "Olympics of programming competitions" and the performance of Indian teams in the world finals. He spoke about International Olympiad for informatics (IOI) and Indian National Olympiad in Informatics(INOI) and the need for creating awareness about this contest in the school students. He also spoke about Codechef's Go for Gold initiative to encourage Indian teams/students to perform their best at ICPC World Finals and IOI.

Codechef conducts a 10 day contest every month, the Long Challenge, which is a good way to learn new algorithms and data structures. In the month of March, 52 people participated in the Long Challenge contest, which is the largest participation from our college in any long challenge and in the month of April, we had 35 people participating despite the semester practicals. We hope that people consistently participate in Long challenge which will improve their problem solving skill.

We plan to conduct two to three contests every month in the next semester as part of the Competitive programming club. We also plan to host the online programming contest of Invente (OLPC) and ACM's OLPC events on Codechef platform.

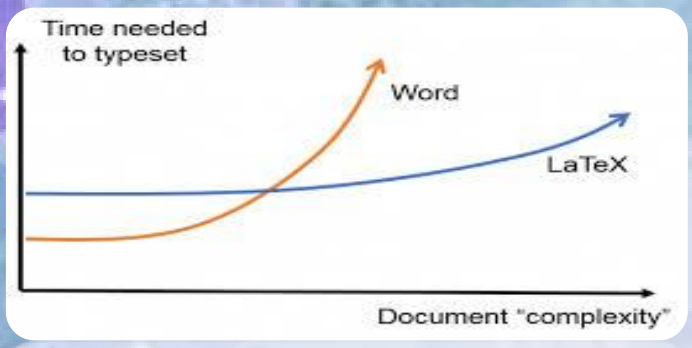
Roopeshwar D, III –CSE B

WORKSHOP ON LATEX

LaTeX is an extremely useful tool for typing and formatting scientific and research documents. Latex is a type setting system of high quality, which takes care of the appearance of the document allowing the authors to concentrate on the content of the document. It is used for typesetting any type of journal articles, technical books and presentations. It also has the features for typesetting complex mathematical formulae and equations. Getting the knowledge on how to use LaTeX will be helpful to all the graduate students, who need to do their project reports and research papers in Latex.

The LaTeX workshop was conducted by the IEEE and CSI student chapter at the Department of CSE on 11th February, 2017. The workshop had five sessions handled by the faculty of the CSE Department.

The session started by 8:30 am at the PG Lab 1 of the CSE Department. As it was a hands-on workshop, each of us was given a system to work. The LaTeX software set up was first circulated among us in a pen drive so that it could be installed before the first session. The student representatives helped in installing the LaTeX software in both linux and windows. Installation in Linux comprised of running two commands in the terminal where as installation in Windows was through the setup downloaded.



The **first session** was handled by **Dr. S. Sheerazuddin, Asso.Prof./CSE**.

He gave an introduction about what LaTeX is all about and the history behind the development of LaTeX. He briefed about the advantages and disadvantages of using LaTeX in research documents. He also dealt about how to start a document in LaTeX and the basic syntax of writing a **hello world latex example**. He taught the basics of running a LaTeX code in a command line or terminal. He said about the need to have **LLNCS packages** for several styles and packages used in LaTeX. He explained the **Preamble part of the LaTeX code** which is in between the document class tag and begin tag. He told about the various **sectioning commands** like **\part,\chapter,\section,\subsection** etc. The format to include bullets and numbers was also explained with examples using the syntax **\begin{itemize} for bullets** and **\begin {enumerate} for numbers.**

The **second session** was handled by **Dr. J.Suresh, Asso.Prof./CSE**.

He handled the session for including mathematical formulae and equations in LaTeX. He introduced the packages like **amsmath** and **mathtools** to include mathematical formulae in the LaTeX document, which can be included by the syntax **\usepackage[] {}.** Different mathematical formulae were included in a LaTeX document and the errors were corrected in this session.

The **third session** was handled by **Dr.K.Vallidevi, Asso.Prof./CSE**.
She started the session by giving a tip to draw quality diagrams in open office draw and exporting it as images. She explained the procedure to include diagrams and figures in the LaTeX document. The adjustments of positions and sizes of multiple images in a single page were demonstrated with examples. We drew some diagrams and did the formatting and changed the colours of the figures to be included in the LaTeX document.

The **fourth session** was handled by **Dr. R.Kanchana, Asso.Prof./CSE**.
She started by explaining the steps required to prepare documents and articles in LaTeX. She told how the texts can be **commented and uncommented** through the shortcuts of **ctrl+t** and **ctrl+u** respectively. She told the steps required to **draw a table in latex** with different formatting options. Different tables were drawn and included in the LaTeX document in this session. She told the syntax required to **write the abstracts** of the research papers using the commands of **\begin{abstract} and \end{abstract}.** She also explained the syntax for **writing bibliographies** and giving their references inside the main document through reference commands.
The **final session** was handled by **Dr. R.S.Milton.** He explained the steps required to do good presentation slides using LaTeX by demonstrating it with the presentation slides made with LaTeX. He told the packages to be included to draw graphical figures in LaTeX like **graphicx and TikZ** which is included by using **\begin{*tikzpicture*}.** He suggested **ipe** for drawing flowcharts and other graphics editors like **GNU and EMACS.** He also suggested a package called **tooltim** which shows a diagram when mouse hovers over a word in the presentation. He explained about the **beamer packages and LaTeXiT.**
All the materials required for the various sessions like the sample LaTeX codes and guides were uploaded in the intranet and it was downloaded to run the codes and check the outputs along with the demo. This hands-on session was really interactive and interesting. All the students would have been definitely benefited through this workshop as we all have to do the project reports in LaTeX. We are really grateful to CSI for conducting such a workshop and helping everyone understand the concepts involved in LaTeX through the hands-on sessions. It was a wonderful learning experience.

Varshitha G J
Sridevi G
B.E. CSE B
Final year.

Research Methodologies Workshop

Date: 20-2-17

Session 1: Forenoon

Speaker: **Dr.R.Ramanujam**

Dr. R. Ramanujam, Professor, Institute of Mathematical Sciences, Chennai addressed the audience with an interesting talk on the topic “Research Methodologies”. He gave us the basic idea of the methodology to pursue research. He also insisted that one needs to attach more interest; involvement and dedication to the area of study which we choose to pursue our research. He compared research to a child’s early learning and development. He also highlighted various questions some of which include:

1. How do we develop student research skills?
2. What do adult students need to learn?
3. To what end are research skills to be developed?
4. How to choose a research topic?
5. Finding background information about the topic.
6. Finding books and articles that give information about the topic.
7. Evaluating the information we have gathered.

He encouraged adult students to develop strong research skills, prepare them to be productive problem solvers when they earn their degree and enter the job market. He also insisted we begin our research with what we are familiar. He also added that academic research is a multi-step process that doesn't always go in a straight line. You may find yourself returning to previous stages as you refine your topic.

Following the session was a presentation by Dr.Moses Inbaraj of Madras Christian College, Chennai on the topic “Basics of Research”. He split the entire group of students into seven and assigned tasks to each of them. At the end, he evaluated the performance, observation and different views of each group. He gave details on various national and international funding agencies and funded projects. He highlighted various steps in research which include:

1. Identify research area.
2. Identify specific area of research.
3. Identify issue, problem, Objectives.
4. Develop Research framework.
5. Execute research work.
6. Process and manage data.
7. Analyze results.
8. Report submission.

He insisted that students begin research and not wait for the most important problem to work on. He also added that there was no need to know everything in advance.

Date: 20-2-17

Session 3: Afternoon

Speaker: **Dr.C.Vijayalakshmi**

Dr. C. Vijayalakshmi of VIT University, Chennai had presented a seminar on the topic "Research and Innovation". It included skills and innovation, skills needed for innovation. She spoke on the topic: Motivation in Research which included:

1. Desire to get a research degree along with its consequential benefits.
2. Desire to face the challenge in solving the unsolved problems.
3. Desire to get intellectual joy of doing some creative work.

She spoke about Data Analysis: Techniques and Methods, Hypothesis testing-Steps and example, Qualitative and Quantitative research methods, Survey research and Participant observation.

All the three sessions were very useful to the students and beginners in research work. The students were motivated to take an extra step towards research.

R.Athilakshmi, JRF/ DST-SERB

Workshop on Computational Platforms for Research in Bioinformatics: Challenges at the Interface of CS and Biology

A 2-day workshop on the applications of Computer Science in the field of Biology was held on the 24th and 25th of March, 2017. Professors from various Institutions such as the Institute of Mathematical Science, Indian Institute of Technology, and University of Madras presented during these two days.

The event commenced with the inaugural address by Dr.Chitra Babu, HoD/CSE, following which, Dr. Areejit Samal from IMSc, taught us the basics of biology. He spoke on the vast number of Protein-Protein Interactions and how we can retrieve information from these. He also spoke of his PHD Thesis, and ended up arousing the interests of many gathered that day. After a coffee break, Prof. Dr. N Gautham, University of Madras took over the stage, explaining about how genetic information is stored in the DNA. He also introduced us to several biological databases and their applications. After lunch, R.Athilakshmi, JRF and K.Tejeswinee, ME (CSE) student of our Department staged a demonstration on R, and Keras using Theano and Tensorflow as backend.

The next day was a demo on deep learning, where our faculty Dr. J. Suresh, Asso.Prof./CSE, gave us an outline of 4 different types of deep Neural Networks, after explaining the problems such as the vanishing gradient problem which occur when using Neural Networks. Following this, Dr. Athi Narayanan spoke more on protein folding and protein structures. The second day came to a close with showcase of M.E projects by M.Arunmozhi and A.Poornima of ME (CSE) who have implemented Deep Learning techniques.

All in all, it was a good experience, as now we have exposure on how Computer Science could be integrated with Biology.

-Gajesh S,
II Yr CSE - B

Celebrating 50 years of Computing's Greatest Achievements

ACM India Chennai Professional Chapter had planned to organize a Series of Talks on Turing Award Laureates as a mark of celebrating 50 years of Computing' Greatest Achievements. On March 21st, 2017, Prof.Dr.Madhavan Mukund, President - ACM India, gave an enlightening talk on the 'Significant Contributions of Edsger.W.Dijkstra – 1972, Turing Awardee'.

Edsger Wybe Dijkstra (11 May 1930 – 6 August 2002) was a Dutch computer scientist and an early pioneer in many research areas of computing science. He held the Schlumberger Centennial Chair in Computer Sciences at the University of Texas at Austin from 1984 until 1999, and retired as Professor Emeritus in 1999. The academic study of concurrent computing started in the 1960s, with Dijkstra (1965) credited with being the first paper in this field, identifying and solving the mutual exclusion problem. His foundational work on concurrency, semaphores, mutual exclusion (mutex), deadlock (deadly embrace), finding shortest paths in graphs, fault-tolerance, self-stabilization, among many other contributions comprises many of the pillars upon which the field of distributed computing is built.

Edsger Dijkstra received the Turing Award for his contribution in the late 1950s to the development of the ALGOL, a high level programming language, now a model of clarity and mathematical rigor. The years in Austin saw Dijkstra at his best as a teacher and mentor for a generation of undergraduate and graduate students. He enjoyed the experience, appreciating "... brilliant students who made it a challenge and a privilege to lecture for them". He urged universities not to shrink from the challenge of teaching radical novelties.

Dijkstra was famous for his wit and eloquence, such as in his remark:

"The question of whether computers can think is like the question of whether submarines can swim"

In the world of computing science, Dijkstra is well known as a "character". In the preface of his book A Discipline of Programming (1976) he stated the following: "For the absence of a bibliography I offer neither explanation nor apology." In fact, most of his articles and books had no references at all. This approach to references was deplored by some researchers. But Dijkstra chose this way of working to preserve his self-reliance.

There was a lot to take back after the talk, having obtained such an informative revelation on one of the greatest scientists, yet so humble and radical in his approach both towards computing and his students.

Dr.Shomona Gracia Jacob,
Asso.Prof./CSE
Member -ACM

International Conference on Management of Data (COMAD-2017) and CODS -2017

The conference began with the opening keynote address by Mr.Ramesh Bhashyam from Teradata on “Challenges for an Analytical Ecosystem”. He stressed that an integrated analytic ecosystem is needed to derive value from the different forms of data. There are many challenges in building and managing such an analytic ecosystem. There are different aspects to programming for access to cross-platform data and cross-analytic engines. This talk was followed by paper presentation on the Industry and tutorial by Dr.Partha Pratim Talukdar, IISc on Large-scale Knowledge Harvesting. He discussed on how knowledge can be harvested / inferenced from large web-scale dataset.

M r.B.Senthil Kumar, AP/CSE

The adoption of this technique in the Google Knowledge Graph and IBM Watson system had spanned several challenging research questions in Machine Learning, Natural Language Processing, Crowdsourcing, Knowledge Representation, Data Management Systems, and Large Data Analytics. Since, he was part of NELL (Never-Ending Language Learner) research team from CMU earlier, he also shared his technology expertise in developing that system.

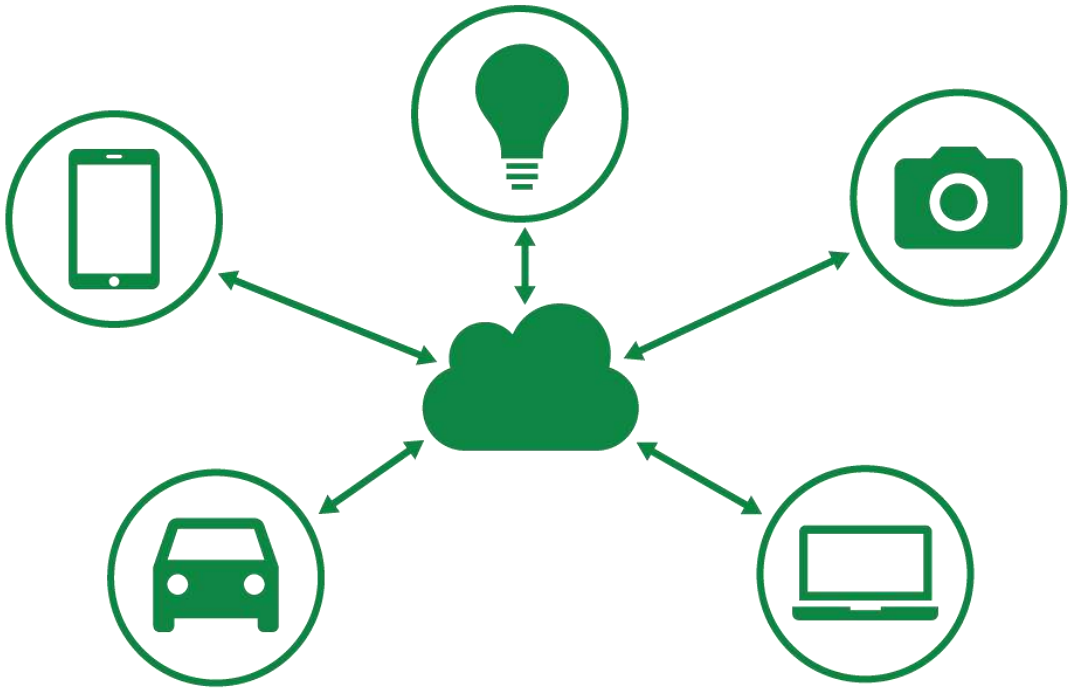
The next day commenced with the opening keynote from Dr.Lise Getoor, Professor from UC, Santa Cruz. The talk was titled “Big Graph Data Science: Inferences from graph data”. She pointed out that one of the challenges in big data analytics lay in being able to reason collectively with a kind of extremely large, heterogeneous, incomplete, and noisy interlinked data. The graph inferencing requires inference patterns needed for graph data, link prediction (predicting edges), and entity resolution. Dr.Lisa also introduced the probabilistic soft logic (PSL), a highly scalable open-source probabilistic programming language for inferencing. The same day I attended an informative tutorial by Rajeev, Vineet from Amazon, on Machine Learning. The first part of the tutorial gave a broad overview and discussed some of the key concepts within machine learning. The second part of the tutorial took the audience through the end-to-end modeling pipeline for a real-world income prediction problem.

The CODS concluded with the Invited talk by Dr. Srini Parthasarathy, Ohio State University on Stochastic Flow Clustering. Dr. Ruslan from CMU delivered a talk on Advances in Deep Learning. He discussed on how intelligent systems are capable of extracting meaningful representations from high-dimensional data using deep learning models. On all the days, the conferences had premier paper presentations from both the academia and the industry. The conference also arranged five Demos on systems like GARUDA, DBridge, etc., and from Oracle on Cloud Database and Stream Analytics.

Guest Lecture on Internet of things

Senior Manager of CapGemini, **Mrs Malvika,** delivered a guest lecture on the framework of Internet of Things on February 2, at the CSE Seminar Hall. All the students of 2nd Year CSE, enjoyed the talk, delving into her experiences and ideas. Initially, she discussed on the various use cases of IOT, both as luxury inducing, and safety inducing – smart fridges and importance of temperature sensors, in places such as nuclear power plants. She emphasized on how IoT collects Big Data at real time and acts based on the information gained from it- and how those combination of sensors and actuators interact with each other, and use internet.

She moved on to discuss of the impact of IOT on various fields such as Factory Automation, Rental, Utilities, and Insurance.



She then recalled one of her previous projects – to check on Scanner Health using IOT. She spoke on how information by the MRI scanner and CAT scanner should not be inaccurate, explaining why it is so crucial. She used IOT to perform proactive analysis.

She finally gave us a ground on working on our own IOT, using a cloud platform named Predix. She told us how we as developers could make the most of it. She told us why deploying on cloud is better than on a server from an economic and a developer point of view, thus concluding the talk.

~Gajesh S & R Nidhi Bhandari

2nd Year, CSE

Scitech Quiz' 2017

Scitech Quiz was conducted by SSN ACM Student Chapter in association with SSN Q! Quiz club and ISTE Student Chapter. It comprised of a preliminary round and a final round. The preliminary round was held on 2nd February, 2017.

It was a team event with a maximum of two members in a team. 16 teams comprising of 32 members attended the preliminary round. The quiz was open to participants from all years and all departments. The preliminary round consisted of questions from Science and technology with specific questions from Computer science.
Out of 16 teams, 6 teams were selected for the finals. The final round of the quiz was held on 6th February, 2017. The finals had similar set of questions and had a buzzer round and a rapid fire round. Saketh AB and Sreenivas V, final year, CSE stood first in the quiz. Arvind Mohan and Aditya Manoharan, third year, CSE got the second position, and team comprising of Raghav Nandakumar from third year, CSE and Praveen, third year, ECE stood third in the quiz.

Prize amounts of Rs. 2000, Rs. 1250, and RS. 750 were given to the winners respectively.

CODE FROM HOME' 2017

SSN ACM Student Chapter conducted the fourth version of Code from home, an online programming contest which was conducted on 15th February, 2017 in Hackerrank platform.

The contest was a public contest which was open to all and students of local ACM chapters in Chennai were invited to participate in the contest.
The contest comprised of 5 problems ranging from easy to medium and hard in their difficulty level which required application of algorithms and data structures to solve them. The duration of the contest was two hours and it was from 7:00 PM - 9:00 PM. We had 100 people who registered to take part in the contest and 45 people solved at least one problem. Narayan, from IIT Madras solved all the five problems within an hour from the start of the contest and stood first in the contest. There was tough competition for the second place throughout the contest. Three people had solved 4 problems at the end of the contest.

Since it was an ACM styled leader board, the total time taken was used to break the tie and decide the runner up of the contest. Akshay Venkat, from MIT stood second based on the ACM leader board. Murugappan, from IT department of SSN stood third and was just 2 minutes slower than Akshay based on the total time taken. Prize money of Rs.1500 and Rs.750 was given to the winner and the runner up respectively.

We hope everyone liked the problems and had fun solving them. We hope to continue having good problems to solve in the next version of code from home.

CODE COUNTY V5.0

Code County v5.0, the annual intra collegiate onsite programming contest, conducted by SSN ACM Student Chapter was held on 29th March, 2017. The contest was open to everyone from all departments except final years of CSE and IT departments.

The contest comprised of two rounds, prelims and finals. The prelims were held in Windows programming lab and Software engineering lab in CSE department from 9:00 AM - 12:30 PM. It was a team contest and people could either contest as a lone wolf or as a team of two members. We had 32 participants for the prelims. The prelims comprised of questions on sorting, data structures, dynamic programming, Big Oh notation, debugging and finding outputs in C and C++.9 teams from the prelims went through to the final round which was scheduled from 1:30 - 3:30 PM. The problems for the finals were set in Hackerrank platform as a local contest. But due to Smart India Hackathon, the internet bandwidth was reserved for their use. So we decided to conduct the finals from 7:00 PM - 8:45 PM the same day. The selected teams were given the contest 'url' in hackerrank and as a team they were told to submit their code from a single account. The final contest comprised of four problems whose difficulty levels were easy, easy medium,medium and medium hard.

Sudharsan as a lone wolf, from second year, CSE, solved 3 out of 4 problems in 45 minutes and stood first in the contest. The team consisting of Murugappan and Chandramowli, from second year, IT, solved 2 out of 4 problems with a time penalty of 81 minutes to bag the second place in the contest.

Dr. Chitra Babu, HoD- CSE, gave away the prizes to the winner and the runner up. Prize money of Rs.1000 and Rs.500 was given to the winner and the runner up respectively.

Sudharsan receiving the first prize from Dr.Chitra Babu, HoD/CSE

Murugappan receiving the runner-up prize from Dr.Chitra Babu, HoD/CSE

SSN - ACM Student Chapter Team

Higher Education Corner

Arizona State University

- Anirruth Ragav VJ
- Hariharan B
- Krithika N
- Lakshmi Divya
- D Tej Tharang
- G K Parinitha
- Supriyaa D
- N Thiviya Kalyani
- G Vignesh
- T V Vishal

Carnegie Mellon University

- Sudha M R

Digipen Institute Of Technology

- Satchit NS

Drexel University

- Akshay Jayakumar
- Sudha M R

Georgia Tech

- Keshav R

George Mason University

- Gokul K

IUPUI, Indianapolis

- Rithesh Rohan (MS HCI)

Illinois Institute of Technology

- Azlagiyavaanan SL

Monash University,

- Hariharan B

New York University

- G Vignesh

New York University (Tandon)

- Anirruth Ragav VJ

Northeastern University

- Anirruth Ragav VJ

North Carolina State University

- Akshay R
- Rajan A
- G Vignesh
- V Vijay
- T V Vishal

Ohio State University

- Nikitha L

SUNY, Buffalo

- Lakshmi Divya JK

Purdue University

- Rithesh Rohan
- Sudha M R

Rochester Institute of Technology

- Lohith AR
- Rithesh Rohan
- D Supriyaa

Southern Methodist University Guildhall

- Satchit NS

Syracuse University

- Rajan A

University of Central Florida

- Gokul K
- Lohith AR
- Satchit NS

Texas A&M University, College Station

- Sudha M R

University of Iowa

- D Tej Tharang

University of California, San Diego

- G Vignesh
- T V Vishal

University of Illinois, Chicago

- Ajay Venkatesh N
- Hariharan B
- Krithika N
- Lakshmi Divya JK
- Parinitha GK
- Sudha M R
- Supriyaa D

University of Massachusetts, Amherst

- Ananya Ganesh
- Vishal TV

University of Southern California

- Nikitha
- V Vijay

University of Miami

- Gokul K

University of Maryland, College

- Rithesh Rohan

University of Montreal

- Rithesh Kumar

University of North Carolina, Charlotte

- Tej Tharang D

University of Southern Florida

- Gokul K

University of Texas, Dallas

- Akshay R
- Gokul K
- Hariharan B
- Kritivasan R
- Tej Tharang D
- Parinitha GK
- Thiviya Kalyani N

Applied CS with Android Facilitator

Applied Computer Science with Android is a Google initiative to help university students understand and apply computer science concepts using the Android platform.

Facilitators are junior, senior, graduate or doctoral university students who act as the primary lead for the Applied CS with Android program at their university. They partner with Googlers, faculty and students on planning and hosting the program workshops and code sprint.

Adithya J, III yr CSE, has been selected as the facilitator for the Google Applied CS with Android Program.

Adithya J, III – CSE A

PLACEMENTS

S.No	Name	Company	Course
1.	Priyanka.P	Sports Mechanics	M.E. (CSE)
2.	Preetha R		M.E. (SE)
3.	Anandan B		B.E. (CSE)
4.	Susanth G	National Payments Corporation	M.E. (CSE)
5.	Preethi Naveena Selvi. K		
6.	Balaji Rao	IDBI Federal Insurance	B.E. (CSE)
7.	Karthick M		
8.	Aishwarya M		M.E. (CSE)
9.	Amirtha Bali		
10.	Kavietha H		
11.	Nishanth Kumar P		
12.	Mano Ranjani D R		M.E. (SE)

SUMMER INTERNSHIPS

S.No	Name	Class	Company
1.	Prashant Mahesh	III yr	Google, Seattle – Washington
2.	Keshav T		Amazon
3.	Roopeshwar D		
4.	Avinash Bharat		
5.	Arvind S		
6.	Varun Ranganathan		IIT, Madras
7.	Sivagami S N		TCS Innovation Lab
8.	Swathi N	II yr	Hasura
9.	Priyadharshini JR		Crayon' d
10.	M.Anirudh		IIT, Madras
11.	Aakash Milton		ByteAlly
12.	Arul Thileeban		Amazon
13.	Daniel		
14.	Madhu Rata G		L&T
15.	Meha M		
16.	Aarif N		VakilSearch
17.	Himanshu Singhal		ChikSoft Technologies
18.	Aakash S		SPI Cinemas
19.	Priscilla Andrew		Intellect
20.	Vishal		GoBumpr, Metaverse (Freshdesk)
21.	Bhaskar		PurpleSlate
22.	C Sathya Narayanan		Voltrent Networks
23.	Gajesh S		Spinircle Inc.
24.	Baby Sowjanya	**ME (CSE)**	SAP Labs

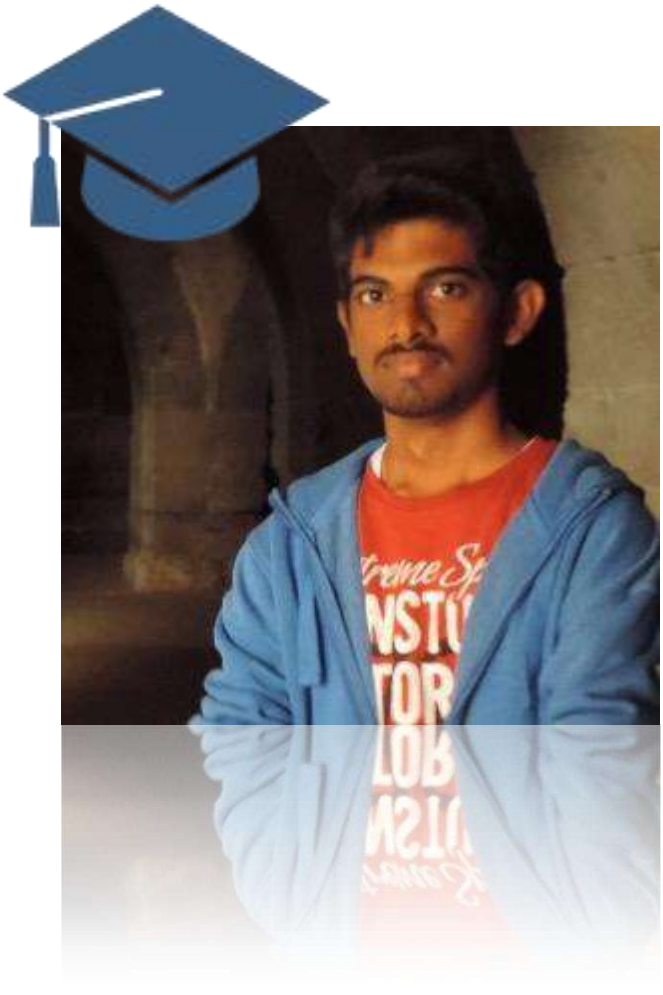
Soaring at heights!

I would like to share my research paper titled "**Deep Learning the Indus Script**" that recently got archived at arXiv Library. **Link:** https://arxiv.org/abs/1702.00523.

I did this work under the guidance of Prof. Ronojoy Adhikari from IMSc.
My current work at IMSc and this publication got a great response and coverage from the press too.

The Verge, US based technology magazine, also did a coverage on this work, **Link:** http://www.theverge.com/2017/1/25/14371450/indus-valley-civilization-ancient-seals-symbols-language-algorithms-ai

TheTimes of India's coverage can be found at
Newspaper Edition: http://epaperbeta.timesofindia.com/index.aspx?eid=31807&dt=20170222# (Page 7). **Online Verison:** http://timesofindia.indiatimes.com/city/chennai/app-may-help-decipher-indus-valley-symbols/articleshow/57281369.cms



Researchers Look To Widen Script Database, Solve Mystery

New app could help decipher ancient Indus Valley symbols

U.Tejonmayam
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As the Egyptian civilisation flourished and its calligraphers documented the rise and fall of one of man's greatest cultures in the period circa 3,500BC-1,300BC, another great civilisation arose in the Indus Valley in the northwest of the Indian subcontinent.

Much less is known about the Indus Valley Civilisation than its Egyptian equivalent, however — about its development, governance, activities, discoveries and daily life — because historians are comparatively short on information and yet to fully interpret the script of these ancient people.

To the common man, however, the limited corpus of hieroglyphs and other symbols that historians have uncovered from the Indus Valley bear an uncanny resemblance to those found along River Nile. Scientists linked the script to ancient Dravidian languages and an early form of Sanskrit but its meaning remains an enigma.

Here's a discovery, however, that could help change that.

Artificial intelligence involved in innovations like self-driving cars, which mimics the functions of the human brain, may now aid researchers to develop a computerised database for Indus script that could eventually help decipher the texts. Scientists are also working on a mobile application of the software.

The technology will allow archaeologists and amateur history buffs alike to, say, capture images of seals on pottery and share it online via the app to assist experts devoted to the recognition and transcription of the script. It will also provide an approximate date by recognition of the iconography and its style. The app will filter the text from the image and identify the presence or absence of individual characters in an existing database. If it is a known symbol, the app will display a number representing each character in the texts in the database; if not, it will include the symbol in the database. The output will be a string of graphemes (characters) and a corresponding number in the database, suitable for inclusion in a standard corpus.

A professor from Institute of Mathematical Sciences (IMSc), Chennai, and an engineer developed the app. Satish Palaniappan, an SSN College of Engineering graduate who worked on the app, said the sequence of numbers may help in the search for similar sequences in script, giving researchers a chance to draw inferences like origins or link between regions of the Indus Valley.

"That will be our next stage of research," Palaniappan said. "This app is for data accumulation and to learn new symbols. Automating corpus preparation will speed up research to decipher the script."

IMSc professor Romojoy Adhikari said the app will augment the available corpus of Indus texts by automatically transcribing writing on artefacts. "There will be more texts to study," he said.

Researchers used 'deep learning' to develop the technology. "Deep learning is basically an artificial neural network-based learning technique, inspired by layers of interconnected neurons in the brain that interact and make decisions," Palaniappan said. "Deep learning has never been used before in epigraphic research."

The app is crucial to make big leaps in epigraphic research, "A researcher has to know the history and sequence of symbols," Palaniappan said. "It takes years to compile texts from artefacts and put them in a form that a computer will understand. We wanted to bridge that gap."

DAWN OF TIME

The computer application can be used to identify elements belonging to the Indus script

- **The image of the seal is scanned on all sides that are likely to have the Indus script symbols** or depictions of animals like bulls and unicorns, and deities
- The image is further classified into 'text', 'no-text', and 'both'. **The 'text' region consists of only the Indus script graphemes (unit or letter), the 'no-text' region consists of non-graphemic elements**
- **The results are in a sequence of numbers.** New characters are added to the database
- A customised algorithm **segments out individual units or letters to identify it**
- **The identified units or letters are classified into one of 417 classes, the known number of Indus graphemes,** according to scholar Iravatham Mahadevan

ASI recently excavated structures resembling those at **Harappa from Keeladi village, Sivagangai district. They are believed to be 2,000 years old**

MODERN TAKE ON HISTORY

- **The Indus Valley Civilisation is one of the oldest known of the ancient civilisations.** It existed from 2500 BC to 1300 BC
- Discovered in the 1920s, it was spread over **12.6lakh sqkm covering parts of Pakistan, Afghanistan and India**
- It included around **1,000 well-planned villages, towns and cities, with two prominent cities, Harappa and Mohenjo-daro**
- Seals were used for **ritualistic, commercial and religious purposes**
- **Copper, bronze, pottery and terracotta toys, steatite (soapstone) seals** were retrieved from the sites. Many of these were engraved with animal figures

Though the origin and decline of the **civilisation remain a mystery, there are theories that floods, deforestation or the invasion of Aryans** could be among reasons

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(2012-2016) – B.E.(CSE)
Associate Software Engineer – Qube Cinema Technologies

LAKSHMI FOR SARASWATHI

It was one fine day. Goddess Lakshmi went to have lunch with Saraswathi. After having had a sumptuous meal, they started discussing how supreme each one's powers were. Soon the discussion became an argument.

"The world is nothing without me. People need money to live their lives. To buy essentials. For everything!! " told Lakshmi.

"Only if you are educated, you can be civilized enough! Then only comes employment and wages" claimed Saraswathi.

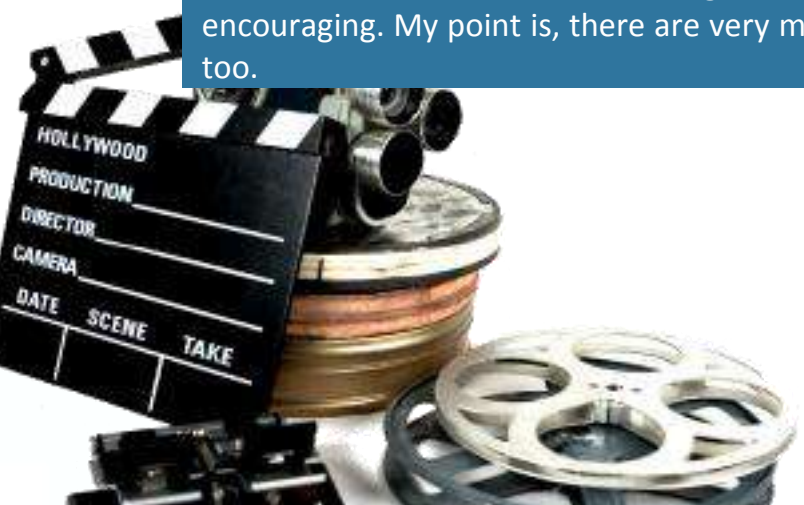
CUT!!!!!

Yes it was a TV serial which was being shot in my locality. I started walking my way home. Many thoughts knocked my brain door. Here are few which entered into! This article is kind of debate on whether we need Lakshmi for Saraswathi or Saraswathi for Lakshmi.

In a school in my locality, where parents stand in line, for whole nights to get an admission form, the fee for kindergarten is 90,500. I was stunned. Why is it so costly to educate children?

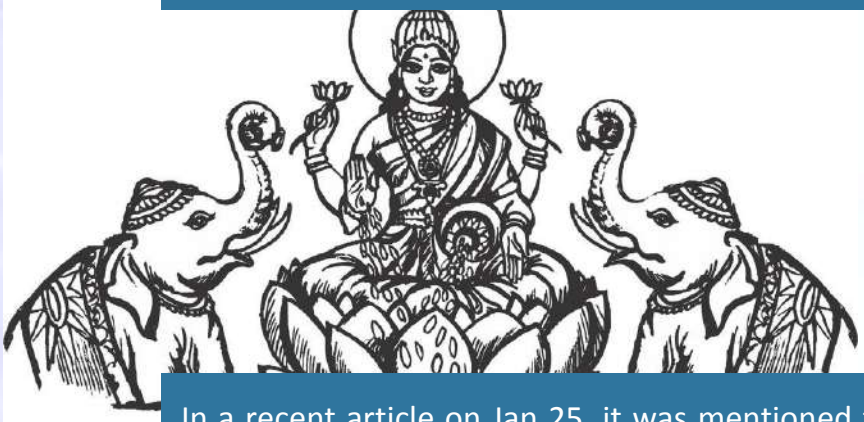
The inquisitiveness took me a step ahead. I happened to talk with a teacher working in the school. Her only answers were fame and reputation. Right, we can afford money for quality. But is it really a place of quality? This question has to be answered. Paying lakhs only for reputation and getting nothing in return is awry.

Have you ever watched television on the day of board exam results? If not, please do! You will learn many surprising truths. Yes, for past eight to nine years, government schools have started to contribute to top ranks as well. Of course, private schools also do! What's the difference? Seeing such a feat as an advertisement factor is not encouraging. My point is, there are very many notorious schools producing nice results too.



Come to college! Your twelfth standard mark is the deciding factor. Your voices and choices have no effect, brace yourself, your cutoff marks and session rank do! The blinding speed at which seats get filled up is really surprising. Getting a nice college in counselling – if you succeed in this, you can proudly say that you nailed it. In some colleges, paying lakhs as donation for a seat is not tolerable at all. What do you think would be the skillets of a person graduating from such a college?

This is what I wanted to speak on **Saraswathi for Lakshmi** – that is spending money for education.



In a recent article on Jan 25, it was mentioned that 80% of engineering graduates are unemployable in India and only 7% are employable. Why all this? A company which comes to recruit students takes the upper belt of students and so these grads come out with flying colours. What about the rest? They find it against the collar to earn their living.

White collared or pink collared, never mind! You should have a job for you. That's what fetches you everything. Our parents would never feel us as a burden and they'd be ready even to bring us up throughout life. But that's not how things are. It's our turn now. We should earn our bread and give them some.

"Mom, my first month salary" would be the happiest moment ever in life -both for you and your mother. As life is a cycle you can't escape from, of course, you will become a family man one day. That day, you will feel how mightier money is for life. Wait, I never said **money is everything.** But these days, things you get for free is not worth the effort. Affection or Android phone? Care or car? I don't want to extend the list.

Despite being illiterate, there are many crocodiles here in our country who's names top the list of account holders in foreign banks. How did they earn lakhs of crores of money though they don't have education? I leave the answer for this question to you.

Well that's what I wanted to tell upon – **Lakshmi for Saraswathi.** I'll sum it up like this. It's all a cycle. For a normal man,

Only if you get **Saraswathi for Lakshmi** in your childhood, you can get **Lakshmi for Saraswathi** in the years that follow!!!!

Sri Raghav
IV year

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