VOLUME 5: ISSUE: 2

SMRITHI

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

SNEAK PEEK

MISSION ACCOMPLISHED

"M.E. (CSE) PROGRAMME – ACCREDITED BY NBA FOR FIVE YEARS! "

(2016 – 2021)!

HOD'S DESK

It has been a hectic semester packed with lots of activities. We all are extremely delighted and rightfully proud of obtaining a 5-year accreditation for our M.E (CSE) program from the National Board of Accreditation (NBA). This incredible feat would not have been possible but for the dedicated efforts of the PG NBA team, Milton Sir, Shomona and Felix. I place my heartfelt appreciations to them, as well as the criteria heads who paid attention to every small detail and all the department faculty members and staff who contributed their best towards achieving this objective. Our college also successfully obtained the ISO re-certification for the next 3 years as per the ISO 9001:2015. I would like to compliment Thenmozhi and Madheswari for spearheading the ISO-related efforts.

It had been my desire for quite some time to organize an event that is meant for the fresh undergraduate students which gently introduces the computational and logical thinking that is very much essential to excel in the Computer Science discipline. I initially had a long discussion with Dr. Ranjani Parthasarathi of the College of Engineering, Guindy, regarding what sessions could potentially be part of such an event. Next, I had an elaborate discussion with Dr. R. Ramanujam of the Institute of Mathematical Sciences (IMSc), who encouraged this idea to a large extent and also provided several suggestions for the analytical puzzle-solving sessions. With all these suggestions along with the efforts of Bala, Sarath, Raji, Angel and the enthusiastic student volunteers, the workshop on computational thinking became a reality.

I appreciate Raghu, Saritha, Lekshmi and Madheswari for organizing the 2-day workshop on Intelligent Image processing. The session on "Deep Learning" was very informative. We had productive interactions with several industries such as Caterpillar, Manatec, Tata Elxsi, Wabco India Ltd and Polaris. Most recently, a startup company called Vimana Technologies is very keen in having research collaborations with us in the area of Image Processing and Machine Learning.

This year, the technical symposiums of the various departments were integrated into a unique college-wide symposium INVENTE. My compliments to the office bearers of the Association of Computer Engineers, for organizing a large variety of events successfully. I commend the student teams who displayed their creative projects during the inaugural function of Innovation and Incubation Centre by our beloved Chairman Dr. Shiv Nadar. I appreciate the CSI office bearers for conducting a variety of events during the semester. I congratulate all the students who have received excellent job offers from various companies.

Let us dream big and channel our efforts to scale new heights.

Dr.Chitra Babu

HoD-CSE

Industrial Visits

1. Ms.Beulah A. and Mr.N.Sujaudeen accompanied III year students for an Industrial visit to Tech Mahindra, Sholinganallur on 11th August, 2016.
2. Mr. K. R. Sarath Chandran and Ms. K. Lekshmi accompanied II year students for an Industrial visit to CTS, SIPCOT IT Park, OMR, on 20th August, 2016.
3. Dr. Shomona Gracia Jacob and Ms. M. Saritha accompanied the students of M.E CSE and SE for the Industrial Visit at Institute of Mathematical Science (IMSc), Taramani, on 30th August, 2016.

Guest Lectures

1. Dr. Raj Ramesh TopSigma Consulting, Bloomington, IL, USA delivered a guest lecture on "Recent Trends - Digital Architecture for Business Transformation" on 21st Sep, 2016. The audience were first year students of ME CSE and Final year students of ME(CSE), and ME(SE).
2. Dr. Nishanth chandran, Microsoft Research India, Bangalore delivered a guest lecture on "Cryptographic Techniques for Cloud Security Challenges" on 16th Aug, 2016. The audience were Final year students of BE, ME(CSE), and ME(SE).

Workshops Organised

1. Dr. Chitra Babu along with Mr. V. Balasubramanian, Mr. K. R. Sarath Chandran, Ms. S. Rajalakshmi and Ms. Angel Deborah organized a two day workshop on "Computational thinking" for the I year CSE students, on 5th and 6th of August, 2016.
2. Dr. G. Raghuraman, Asso.Prof./CSE Ms. K. Lekshmi, AP/CSE, Ms. M. Saritha,AP/CSE and Ms. K. Madheswari, AP/CSE organized a Two day workshop on "Machine Learning in Intelligent Image Processing" on September 30 and October 1, 2016.

1. ***Lokeswari, Y. V. and Dr. Shomona Gracia Jacob***, "A Comparative study on Parallel Data Mining Algorithms using Hadoop Map Reduce: A Survey." In Proceedings of the Second International Conference on Information and Communication Technology for Competitive Strategies, ACM, March 2016, pp 143-148.
2. ***S.Kavitha,B.Bharathi, K.Mohana Priya,S.Mohana Priya and V.C.Nithus Sushmy***, "Optimal feature set selection for brain tumor classification using genetic algorithm with support vector machine and decision tree", in Asian Journal of Research in Social Sciences and Humanities, 6(9), September 2016, pp. 660-670. ISSN 2249-7315. DOI NUMBER: 10.5958/2249-7315.2016.00825.X.
3. ***Ms.K Madheswari, Dr.N Venkateswaran***, "Swarm intelligence based ptimisation in thermal image fusion using dual tree discrete wavelet transform" in Quantitative Infrared Thermography Journal(Thomson Reuters, IF:1.200, Annexure-I), Taylor and Francis, First Online, pp:1-20, september 16, 2016.
4. ***Mr.N. Sujaudeen, Ms C. Narmatha***, "Resource Provisioning and Load Balancing For Three-tier Application in Cloud environment" in the Australian Journal of Basic and Applied Sciences, August 30 2016, pp 28-36.
5. ***R.Priyadharsini, Dr. Sree Sharmila***, "An Efficient Edge Detection Technique Using Filtering and Morphological Operations for Underwater Acoustic Images" In Proceedings of the Second International Conference on Information and Communication Technology for Competitive Strategies, ACM, March 2016.
6. ***Shomona GJ, R Geetha Ramani***, "Software Defect Prediction in Large Space Systems through Hybrid Feature Selection and Classification" in International Arab Journal of Information Technology (Thomson Reuters SCI IF:0.519), First Online.
7. ***S. Sivasankari, Shomona Gracia Jacob***, "Investigation on the Performance of Classifiers in Prediction of Erythemato-Squamous Disease: An Automated Ontology Learning (AOL) Methodology", Middle East Journal of Scientific Research(SJR:0.16),24(8),pp.2567-2576.
8. ***S.V. Jansi Rani, P. Narayanasamy***, "Enhancing TCP Performance by detecting spurious RTO in Wireless Network", International Journal of Applied Engineering Research, Vol. 11(4), 2016, pp. 2651 – 2657.

9. ***V. Ajay, S. Shivaranjani, S.L. Azlagiavanan, R. Priyadharsini***, "An Efficient Exemplar Based Inpainting and Super Resolution Algorithm for Images" in Middle-East Journal of Scientific Research,vol(24)No(9): 2878-2885,Oct 2016,ISSN 1990-9233,DOI: 10.5829/idosi.mejsr.2016.24.09.23944.
10. ***Ms.K.Madheswari, Dr.N.Venkateswaran***, "An optimal weighted averaging fusion strategy for thermal and visible images using dual tree discrete wavelet transform and self tunning particle swarm optimization" in multimedia tools and applications,(springer, Annexure-I, IF=1.331,Thomson reuters). PP:1-22. October-2016.
11. ***Pooja G, Mohanasundari R, Chamundeswari A***, "Search Based Test Data generation: A Multi Objective Approach using MOPSO Evolutionary Algorithm" at ACM Compute 2016, oct 21-23, 2016, Gandhi Nagar, India.
12. ***Abhinaya A, Nandhini priya N, Vanathi M, Monica R, Chamundeswari A***, "Resolving Team Selection in Agile Development using NSGA-II Algorithm", at 3rd International Conference on Recent Development in Science, Engineering and Technology, Oct 21-22, 2016, Gurgaon, India.
13. ***B Hariharan, R Krithivasan, Ms.S.Angel Deborah*** ,"Prediction of Secondary School Students' Alcohol Addiction using Random Forest" in International Journal of Computer Applications, Vol. 149, Issue Number:6, pp: 21 – 25. ISSN: 0975 – 8887 (Online).
14. ***Krithika Narayanan, Azlagiavanan Senthil, Anirruth Ragav VJ., Shomona Gracia Jacob***, A Comparative Study on the Performance of Feature Selection Algorithms in Prediction of Down'ssyndrome in Mice Models Using Protein Expression Levels, Middle-East Journal of Scientific Research 24 (9): 2952-2956, 2016.

Alumna Achievement

The alumna of the M.E (Software Engg.) programme – Department of CSE, I batch (graduated in 2013), ***Ms. Lakshmipriya*** has been now appointed as *Assistant commissioner of commercial taxes* (Tamil Nadu Public Service Commission – Group1 officer).

Faculty Activities

1. ***Dr. Chitra babu*** and ***Dr. T. T. Mirnalinee*** visited Tata Elxsi at the IITM Research Park to discuss possible areas of research collaboration.
2. ***Dr. Suresh J*** visited Caterpillar for a project discussion.
3. ***Dr.Shomona GJ*** reviewed papers on “Monaural Speech Separation using GA" and "Adaptive Fuzzy systems" on invitation from the Editor of "International Journal of Advanced Intelligence Paradigms - Inderscience Publishers".
4. ***Dr.Suresh J*** conducted the Doctoral Committee meeting for course work approval in respect of Research Scholar Mrs. M. Kiruthigha who is pursuing Ph.D at Anna University under Part-time category.
5. ***Ms. Beulah A.*** attended Two day workshop on "Machine Learning in Intelligent Image Processing" on September 30 and October 1, 2016, organized by Dept of CSE, SSNCE.
6. ***Ms. K. Madheswari***, AP/CSE along with ***Dr.N Venkateswaran***, Prof/ECE submitted a project proposal titled “Development of optimized Image fusion techniques for Multispectral and PAN images of Catrosat-2C satellite" submitted to ISRO.
7. ***Dr.A.Chamundeswari*** participated in CSI Chennai Chapter general meeting with CSI, President, Dr Anirban Basu, on 9th September 2016. Various SBCs also participated to discuss various activities by the Student Branches.
8. ***Dr. Chitra Babu*** and ***Dr. Shomona Gracia Jacob*** attended the ACM India Chennai Chapter meeting. Dr. Shomona Gracia Jacob was nominated as the treasurer for the ACM India Chennai Professional Chapter during the ACM chapter meeting that was convened on 2nd September 2016 at the Institute of Mathematical Sciences.
9. ***Mr. Arunkumar Krishnan*** and ***Ms. Uthara*** from VentunoTech visited the department to discuss the possibility of students pursuing internships in their company in the area of Machine Learning and Image Processing.
10. ***Dr. Chitra Babu*** along with ***Dr. D. Thenmozhi*** and ***Ms. K. Madheswari*** coordinated the effort of ISO 9001:2015 Recertification audit process with the TUV-NORD auditor Mr. K. M. Chandrasekaran.

11. ***Mr. Thirumavalavan*** from Manatec Ltd, Pondicherry visited the department and discussed regarding the projects that are of interest to Manatec that can be taken by our department faculty and students.
12. ***Dr. Chitra Babu***, ***Dr. V. S. Felix Enigo*** and ***Ms. B. Prabavathy*** along with two of the III year students attended a project meeting at Caterpillar.
13. ***Dr. Chitra babu*** and ***Dr. R.S. Milton*** were part of the evaluation committee of ongoing internal funded faculty projects.
14. ***Dr. G. Raghuraman*** and ***Mr. N. Sujaudeen*** attended "Cognizant FDP on Expectations and Future of IT Industry!" at CTS, Tambaram MEPZ Office, Chennai, on October 22, 2016.
15. ***ACM Student Chapter*** of SSN organized a hands-on workshop on "STL for C++ Beginners" to help the students understand and use the various containers in Standard Template Library of C++, from 26th to 28th August, 2015.

Industry – Institute Interaction

Mr. Krishna Sudarshan, CEO of a start-up company named Vimana Technologies and Dr. Rangarajan Krishnamoorthy, CTO, visited the department to have detailed discussions on potential collaborative research work. The primary business of Vimana Technologies is to process the images captured by drones and derive significant insights by analyzing them using Machine Learning Techniques. Currently, the company is working in the construction industries vertical.

From Left – Dr.S.Kavitha, Dr.J.Bhuvana, Ms.R.Priyadharsini, Dr.P.Mirunalini, Dr.T.T.Mirnalinee, Dr.Chitra Babu, Dr. Rangarajan Krishnamoorthy - CTO, Dr.R.S.Milton, Mr. Krishna Sudarshan – CEO.

Inauguration of SSN Innovation and Incubation Cell

It was a great experience preparing to present our projects to the Expert team that was expected on September 3rd, 2016. It made it more special to have our dear founder Padma Bhushan Dr.Shiv Nadar view our projects. There were many rehearsals as far as the department of CSE was concerned. There were presentations to our faculty, presentations to Prof. Dr.Idi Chandy, presentations to the President, and this sure went a long way in boosting our confidence and making us ready for the final show.

The following projects were selected for presentation on September 3rd, 2016.

1) Asritha M, Kruthika B and Indu M of IV CSE, "Power Consumption Monitoring and Analysis".
2) Rajan A and Satchit N of IV CSE, "Virtual Reality based Car Simulation".
3) Akash, Venkatesh S and Vivek Narayanan R of II CSE, "An Intelligent Robotic Hand Arm System".
4) S.Mohanapriya, Alumna, "Brain Tumor Types and Grades Discrimination of MRI Images using Genetic Algorithms and Fuzzy Rule-based approach".
5) Dinesh S, Alumnus, "Wheat Grading using Image Processing and Neural Networks".
6) Sudha M R, Sri Ragav K, SudarAbishek S of IV CSE, "Learning American Sign Language in a Virtual Reality Environment".

Juggling between regular classes, placements, unit tests and preparing for the presentation and demo, the preceding month was definitely demanding, but the very thought that our presentations have made it through to be showcased to the Experts, made the hard work – a bundle of satisfaction and accomplishment.

On that day, September 3rd, we were thrilled to make our presentations and show-case our projects and were delighted to hear the comments of all the Experts and faculty. It was indeed a memorable experience. We hope and encourage our juniors to continue to use their skills in bringing out such innovative ideas and making them a reality.
We thank Prof.Dr.Idi Chandy, the Head of the Department - CSE, our faculty mentors for having given us their expert comments in molding our presentation for the final day. We did learn a lot from this experience.

Panel Discussion

The very same day, Sept 3, 2016, we were informed that there is to be a panel discussion on Innovation ecosystem in India, moderated by Prof.L.S.Ganesh, IITM. It was something new and raised by our curiosity, we decided to attend and get some information on this Innovative Ecosystem and what it really meant.

The panel comprised of some really great experts, each an accomplished person in his own field of interest. It was motivating to see someone as young as Vivek Rajkumar, Founder Airwood, be a part of the panel that sent the thought waves that we too could reach an expert level while we were still young. The way Vivek spoke on how he spent time at the Innovation center at IITM was very encouraging. The other members of the panel, apparently belonging to the more experienced sect revealed their ideas on how the current trend is moving toward entrepreneurship and how money is the least problem one could face. The fact that complaints are the main cause for curiosity which in turn leads to innovation was a rather encouraging thought. The more the complaints about something, the more the room to innovate and improve, really was a motivating idea. The discussion kindled great interest in us to look for avenues and conquer the challenges in making our own debut as entrepreneurs.

To summarize it all, the final touch by Dr.Shiv Nadar was the master piece. The way he recounted his experiences and the hurdles he overcame to reach this level of success and accomplishment in life could not have been stated in a better way. Thank you Sir.

We left the auditorium in a daze and it was like there is so much that we can do... so now where and how do we start... there is the Innovation Centre, let's begin there...

Thank you so much SSN for exposing us to the best things in Academics, Sports, Innovation, and Entrepreneurship... no student could ask for more.

Student Project Team - CSE

FACULTY ACHIEVEMENTS

- Dr. Chitra Babu, Professor and Head, Department of CSE, received the Sahyog Teachers Award from the Redington Foundation at a special function organized for felicitating teachers at the Ramakrishna Missions Students Home, Mylapore.

- Dr.A.Chamundeswari, Professor, Department of CSE, received Senior Educator and Scholar award from National Foundation for Entrepreneurship De velopment, Coimbatore, TamilNadu, India.

SSN Teacher's Day Celebrations
22-09-2016
Best Faculty Awards

Dr.D.Venkata Vara Prasad received the **First Prize** for the Best Faculty - CSE from Kavingar Muthulingam, Ex-MLC, for the academic year 2014 – 2015.

Dr.Shomona Gracia Jacob received the **Second Prize** for the Best Faculty –CSE during the academic year 2014 -2015.

Industry-Institute Interaction

Mr. Rajesh Kuppuswamy, CTO, Polaris Intellect Design visited the department, gave an overview on "Digital Banking" and discussed the possible avenues for collaboration.

Congratulations

Ms. K. Vallidevi, successfully defended her thesis entitled “Pattern-Based Dynamic Reconfiguration of Service-Oriented Applications". She completed her Ph.D under the guidance of Dr. Chitra Babu, HoD, CSE with the Doctoral committee members being Dr. S. Selvakumar, Professor of CSE, NIT - Trichy and Dr. Saswati Mukherjee, Professor of IST, CEG, Anna University, Chennai. The Ph.D Viva-Voce was convened on 26.08.2016 with the Expert members, Dr. S. Kanmani, Professor and Head, Dept. of Information Technology, Pondicherry Engineering College, Puducherry and Dr. A. Ananda Rao, Professor of CSE, JNTUA Engineering College, Anandhapuramu, Andra Pradesh. The Public Viva-Voce Examination was conducted at the Seminar Hall, Department of Computer Science and Engineering, SSN College of Engineering. Nearly 60 members comprising Teaching Faculty, PG and Ph.D Research Scholars witnessed the proceedings.

Fun Fact

One of the world's leading computer and computer peripheral manufacturer, Hewlett Packard, was first started in a garage at Palo Alto, in the year 1939.

IBM Distinguished Speaker Program

The ACM – W and ACM India Chennai Professional Chapter jointly organized the Talk by IBM Distinguished Speaker – Dr.Valentina Salapura, Chief Architect, Resiliency and Business Continuity Watson Health Cloud, IBM Academy of Technology - IBM Master Inventor. The talk was titled - Resiliency Considerations for Mission Critical Applications in the Cloud. It was held at SRM University on 13th October at 2:30 pm. The talk began with a brief introduction to Cloud and Resiliency in Cloud applications. Then the speaker detailed on Resiliency at the VM level and the Infrastructure level. Speaking on Application level resiliency, she detailed on the Cloud born applications, Enterprise level applications, Web-centric cloud and Enterprise data centre. The concept of high-availability clusters and their contribution to handling resiliency was discussed. Finally the process of Disaster Recovery (DR) was presented and the issues and possibility of handling the same was suggested in terms of Traditional DR and Cloud-based DR methods. Since disaster recovery was very difficult to handle in real time scenarios, the talk concluded with a note on Disaster Avoidance. The faculty and students had a one-one interaction with Dr.Salapura and it was indeed an enlightening talk.

Dr.Chitra Babu, HoD-CSE, Dr.Valentina Salapura, Dr.Shomona GJ, Ms.YV Lokeswari,Ms.K.Madheswari

INTRODUCTION TO BITCOIN

The ACM India Chennai Professional Chapter organized a lecture on 2nd September, 2016 at The Institute of Mathematical Sciences, Taramani, Chennai. The talk was titled '"An introduction to BitCoin" by Prof. S.P. Suresh, Chennai Mathematical Institute. The talk commenced exactly at 5 P.M. All faculty, research scholars and students from all areas of study that included computer science, economics, finance, bioinformatics etc., participated in the event. Dr.Chitra Babu, HoD, Dr.Shomona GJ, Asso.Prof, and five undergraduate students from the Department of CSE attended this talk.

Prof.S.P Suresh introduced us initially to the way Bitcoin came into existence. Bitcoin is a digital asset and a payment system introduced by Satoshi Nakamoto in 2008 and released as open-source software in 2009. The system is peer-to-peer and transactions take place between users directly, without an intermediary. These transactions are verified by network nodes and recorded in a public distributed ledger called the blockchain, which uses bitcoin as its unit of account. Each entry in the ledger was an <address, key> value pair. Since the system works without a central repository or single administrator, the U.S. Treasury categorizes bitcoin as a decentralized virtual currency. If one was interested, they could visit sites such as bitcoin.com and electrum.org to get more details on the blockchain.

He introduced the concept of mining in Bitcoins saying that Bitcoins were created as a reward for payment processing work in which users offered their computing power to verify and record payments into a public ledger. This activity was called mining and miners were rewarded with transaction fees and newly created bitcoins. Only the winner could add the first block to the ledger blockchain. Besides being obtained by mining, bitcoins could also be exchanged for other currencies, products, and services. When sending bitcoins, users could pay an optional transaction fee to the miners.

Many queries were raised about the practical issues in implementing bitcoin as a system and the maximum size to which the block ledger could be extended before a winner is selected. Many questions could only be discussed and not answered since answers gave rise to more questions. On the whole, it was an interesting talk and it opened up many avenues to think innovative in terms of implementing this jargon ' Bitcoin' .

Dr.Shomona Gracia Jacob
Asso.Prof/CSE

1 Bitcoin = 43459.01 Indian Rupee... So guess you can have a thousand haircuts with just 1 bitcoin !

TEQIP sponsored one-week FDP on Open Source Technologies

Dr.R.Kanchana was invited to deliver a lecture at the TEQIP sponsored one-week FDP on Open Source Technologies 22-29 Aug 2016. The talk was entitled Topic: Research Methodologies. She also delivered the valedictory address on "Research challenges in Open source Technologies" and gave away certificates to the participants. There were 30 participants.

Workshop on Upa Yoga

As part of celebrations for International day of Yoga on 21st June, 2016, Isha Foundation, Coimbatore has opened up the possibility of UPA YOGA to be offered to the world. Isha Foundation has been a leader in offering scientifically structured solutions for individuals to live as conscious, joyful and healthy human beings.

Time: 10.30 am to 12.00 noon
Date: 21st June 2016
Venue: ECE Seminar hall (Ground floor)
Dress Code: Comfortable loose clothes (For ladies, salwar is preferable)
Condition: Light stomach (1.5 hours after a meal / drink)

Contents: 6 tools of Upa Yoga - Yoga for Health, Joy, Peace, Love, Success and Inner exploration

Organized by: Dr. R. Kanchana

The benefits of Yoga are the following.

- Enhances vitality, focus, memory and productivity
- Strengthens and stabilizes the spine
- Stabilizes the body, mind and emotions
- Can relieve back pain, stress, anxiety and tension
- Can relieve from chronic ailments and improves overall health
- Enhances teamwork and communication
- Imparts a lasting sense of joy, peace and fulfillment

39 participants including faculty members and research scholars attended the session and practiced Upa Yoga.

Faculty Development Program

on

"Expectations and Future of IT Industry"

22nd October, 2016

The One day Faculty Development Program was organized by Cognizant Technology Solutions, MEPZ Campus, for faculty members and placement officers in and around Chennai. More than 180 members across various disciplines had participated in the FDP. The program was scheduled as three sessions. The first session was addressed by Mr. Ramkumar Ramamoorthy, Senior Vice President, Corporate Communication, Cognizant. He delivered a talk on the 'Current trends and happenings in IT' followed by the 'Future of IT Industry'. He gave his insights on the growth of IT industry and the employment status down the line for five years. The second session was handled by the interview panel experts of Cognizant. It was an interactive session where they shared their interview experience and the potentiality of the students. They also gave feedback on how to improve the skill set of the students. Last but not the least, the final session on CTS-CIO Challenge was delivered by the Program Manager, Cognizant. She highlighted the process involved in the CIO Challenge and how well it benefits the students to get intern and final year projects. As a whole, the one day FDP program was an eye opener for faculty members in training their students according to the expectation of the IT industry.

Mr.N.Sujaudeen, Asst. Prof./CSE

Two day Workshop
on
Machine Learning in Intelligent Image Processing

The workshop on "Machine Learning in Intelligent Image Processing" was organized by the Department of Computer Science and Engineering and Machine Learning Research Group (MLRG) during September 30 and October 1, 2016. Dr. G. Raghuraman, Ms. M. Saritha, Ms. K. Lekshmi, and Ms. K Madheswari were coordinators for the program. Participants from various institutions - around twenty eight actively participated in the workshop.

Speakers : Dr. Sridhar S and Dr. Chandrasekhar C

On the first day, the workshop was inaugurated by Dr. Chitra Babu, HoD - CSE, SSNCE. Madam delivered the essence of Artificial Neural Networks (ANN) in academics and mass media. Dr. Milton R.S, Professor, Department of CSE, SSNCE presented a talk on Introduction to Machine Learning. Dr. Sridhar S, Associate Professor, Dept. of IST, Anna University, Chennai, delivered a talk about various Feature Extraction Techniques in Image Processing. Dr. Aravindan C, Professor, Department of CSE, SSNCE started with ANN and discussed its applications in various image processing techniques. Ms. K. Lekshmi and Ms. K. Madheswari, Assistant Professors, Department of CSE, SSNCE, gave hands-on training for Feature Extraction Techniques in Image Processing using Opencv.

The second day, Dr. Chandrasekhar C, Professor at IIT Madras, gave an interesting talk on Deep Learning. He started with a discussion on multi layer Neural Networks. Then, he talked about Convolution Neural Networks on handwritten character recognition. In the second session post lunch, Mr. Hans, IV CSE of SSNCE gave live demonstration on Object recognition using CNN.

Ms.K.Lekshmi & Ms.K.Madheswari
Asst.Prof/CSE

Recent Trends - Digital Architecture for Business Transformation

Dr. Raj Ramesh, TopSigma Consulting, Bloomington, IL, USA was invited to address the Post-graduate students from the Department of CSE on 16.09.2016. The speaker introduced us to the fascinating world of business transformation through digitization. Dr.Ramesh elaborated on how business models and ideas are the driving force to today's success at the business market. Ola and Uber were quoted as examples. He statistically explained that the 'Mobile App' driven model of attracting customers took their trade turnover miles ahead of similar business partners who were experts in this trade for generations. He also presented the current trend of renting out homes for travellers and guests online for reasonable rates and this turnover exceeds that of mid-range hotels. He then concluded with a video on how the digital architecture framework decided the transformation to a business.

ME – CSE Students

WABCO – INDIA LIMITED

and

INEEU – WABCO INDIA BRANCH

Jointly organized

Annual Family Meet' 2016

As a part of the Industry – Institute Interaction, the Department of CSE showcased three student projects at this meet on September 17th, 2016.

The project details are as follows:

(i) Power consumption Monitoring and Analysis
(ii) An Intelligent Robotic Hand Arm System
(iii) Virtual Reality Car Simulator With Gesture And Touch Input

The teams comprised of students from the 2nd, 3rd and final years.

Computational Thinking

Computational Thinking

The workshop on "Computational Thinking" was organized by the Department of Computer Science for the first year CSE students on 5th and 6th August 2016. The workshop began with an enthusiastic talk by Dr. Ramanujam, Professor, Institute of Mathematical Sciences (IMSc), who emphasized the essence of algorithmic thinking and how it can be systematically nurtured and enhanced by solving a variety of mathematical and analytical puzzles. He illustrated how solving Sudoku puzzles could be a highly stimulating activity. After his unique, energetic introduction to binary counting with the help of fingers, it is highly unlikely that anyone would ever forget the binary number system in their lives.

Subsequent to this wonderful talk, the student volunteers organized the first year students into 10 teams. The first event involved arranging each team in sorted order according to a specific criterion such as the date of birth or phone number. One of the members is then asked questions such as "Whose date of birth is 'X'?" He/she is required to answer within minimum time. It illustrated the idea behind the "Binary search" algorithm in an intuitive way. This was followed by a series of games such as Navigation with keywords, bitwise for converting decimal numbers to their binary counterparts, Connections, Pictionary and Logo quiz.

The second day was even more exciting, which began with a talk by Dr. Madhavan Mukund, Professor and Dean of Studies from the Chennai Mathematical Institute (CMI). His talk emphasized the importance of efficient algorithms and their significance in solving real-life problems. It was fantastic how he showed a large-scale practical problem of searching through billions of Aadhaar cards and what a great difference a binary search strategy would make in comparison to the naïve linear search.

He also gave a 10,000 foot view of computer science spanning the whole gamut of topics; from Operating Systems and Networks to Concurrency, Security and Cloud Computing by connecting them to easily understandable analogies such as Mumbai dubbahwalas and immigration queues in airports. Following the talk, there was a session on analytical puzzle-solving. Subsequently, every team was also asked to assemble a jigsaw puzzle. It was heartwarming to see the enthusiasm of students who were totally engrossed in completing these puzzles even well past the lunch-time.

The final session was devoted to exploration of a fun-filled visual programming language named Scratch. The student volunteers did an excellent job of teaching Scratch through demonstrations and hand-holding the first year students in their experiments. Clearly, Scratch won the hearts of the first-year students based on their feedback.

The workshop had communicated the most fun part of computer science but had also imparted the ability to think and work algorithmically. As an added bonus, the program also enabled establishing a special bonding among the first year students as well as between the first year and higher semester students.

did u know??

- ***Hippo Milk is Pink in Color!***
- ***Anatidaephobia : A person suffering from this condition feels that somewhere in the world, a duck or a goose is watching him/her (not attacking or touching, simply watching the individual)!***
- ***If you were to spell every number, you would not come across the word 'A' until you reached 1000!***

Did u ever know??

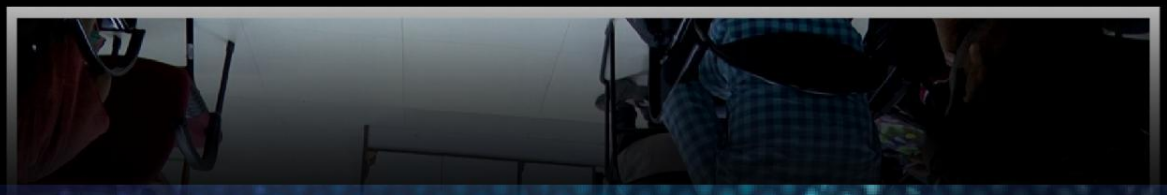
- *HP, Microsoft and Apple have one very interesting thing in common – they were all started in a garage.*
- *The password for the computer controls of nuclear tipped missiles of the U.S was 00000000 for eight years.*
- *Only about 10% of the world's currency is physical money, the rest only exists on computers.*

CRYPTOGRAPHY

Dr. Nishanth Chandran, Microsoft Research India, Bangalore, delivered a lecture on *Cryptographic Techniques* for *Cloud Security Challenges* on 16-AUG-2016. Dr. Nishanth introduced the basic cryptographic concepts like cipher text, public, private keys, pros and cons of traditional encryption algorithms. Polynomial vs. Non-Deterministic Polynomial time problems were discussed which lead towards a statement:"A polynomial time can be given for some hard problem (encryption scheme) only if the encryption scheme can be broken by any algorithm".

Dr. Nishanth discussed the following with examples

1. Zero-knowledge proof
2. Secure Computation
3. Homomorphic / Functional Encryption
4. Program Obfuscation



In Zero knowledge proofs, dynamic proof of retrievability was discussed. Designing protocols like predictive analysis in hospitals was discussed in Secure communication. Types of Homomorphic encryption which includes Additive, Multiplicative and Fully Homomorphic Encryption techniques with an example encryption algorithm was discussed. In Program Obfuscation, Reverse Engineering was introduced. Finally Dr. Nishanth gave an overview of some security issues in Cloud environment.

At the end of the lecture, there was a question and answers session, in which Dr. Nishanth discussed about the importance of Data Remanence (residual representation of digital data that remains even after attempts have been made to remove or erase the data) in Cloud Storage and an example scenario to discuss about how data owner could verify integrity of the data stored in cloud using Hash algorithm. Finally Dr. Nishanth interacted with participants and answered their queries.

Ms.Y.V.Lokeswari,
Asst. Prof./CSE

CSI STUDENTS CHAPTER

SSN COLLEGE OF ENGINEERING

COMPUTER SOCIETY OF INDIA

SSN CSI STUDENT CHAPTER

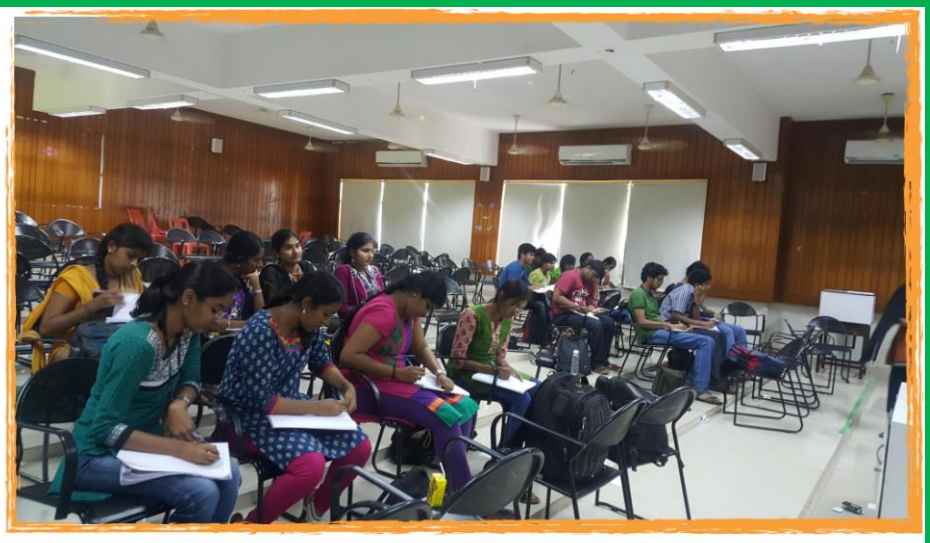
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Event 1: Coding For Placements

The first event for the odd semester 2016 under the CSI – SSN STUDENT CHAPTER banner is the "CODING FOR PLACEMENT" which took place on the 22nd of September 2016 at the Seminar hall. Students from second year, third year and M.E attended the session which has students of final years as the presiding and monitoring guides for them. The first part of the event had final year students sharing their experiences of going through the rigorous placement procedure. The audience had many questions regarding the same which were answered with much enthusiasm. This was followed by an hour and a half long session of coding problems that were posed to them. Each problem had a stipulated time limit after which the solutions were brain-stormed. The session on the whole had students interacting with the placed students on a personal level with valuable inputs and suggestions being shared. The event concluded with the question set being mailed to the students and a vote of thanks by the 4th year students. Overall the event concluded on a vibrant and successful note.

EVENT 2: Technical Aptitude and Puzzle Solving

The second CSI event was conducted on 29th August, 2016 on the topic "Technical Aptitude and Puzzle Solving". The event took place at CSE Seminar Hall from 1:00 pm to 3:30 pm. The event was targeted at second & third years from UG and first years from PG. The event was split into two sessions. The first session dealt with "Technical Aptitude" which had frequently asked questions in the prelims of various companies coming for placements. The main motive of this session was to introduce students to various kinds of tricky questions that were asked in placements. It also aimed at triggering spontaneous thinking of students and at developing their fundamentals in C, C++, OOPS and data structures. This helped students get a basic idea of placements and the areas where they had to focus more to get into a good job. The second session was an interesting session where the puzzle solving capabilities of students were analyzed. Students were given a set of puzzles that were frequently asked in interviews and they were given some time to think and crack the puzzle. It was a very interactive session where students actively participated to come up with a solution.



EVENT 3: Reverse coding and content writing

REVERSE CODING

The event "reverse coding and content writing" occurred at the CSE seminar Hall on 19th September 2016. The audiences were students of second and third years. The theme of the series of the CSI events was to nurture the various skills which students need for their placements. This event introduced the "reverse coding" idea to the participants wherein they had to crack the logic of the program, given the input and output. Many questions asked in this event helped students gain more knowledge in reverse coding functionalities. Following the reverse coding, there was a discussion of some technical aptitude questions. Those questions made the participants realize that there were many areas of computer science they need to improve on. Such was the impact of the tech quiz. Next to the technical aptitude was the last session of the event - "content writing". The importances of content writing skills were discussed with many examples. The guidelines for how to develop content for given scenarios were explained. Following this, the participants were given four scenarios and were evaluated for their content writing skills.

EVENT 4: TALK ON INNOVATION IN INDUSTRY AND DATAWAREHOUSE CONCEPTS

The last CSI event of the odd semester (2016-2017) was held on 26th September 2016 at CSE Seminar Hall. The audiences were final year B.E and M.E students. The resource person was Mr.Dakshinamurthy, an alumnus of our Department (2008 - 2012 batch). He is working as a Data warehouse Developer at Cognizant Technology Solutions. He is a very passionate music composer and choreographer. He started the event with an activity explaining the need for innovative thinking on industrial aspects and approaches on problem solving. The idea of "IFF technique to find prominent issues" was explained. Given a problem statement, the various factors contributing to the problem have to be listed down. Each of these factors should be given a rating out of 5 for Impact, Frequency and Frustration. The final value is calculated as (Impact Frequency)*Frustration. Following this, the various data-warehousing concepts were explained with examples. The event concluded with Dr. A.Chamundeswari giving the speaker a token of gift on behalf of the department.

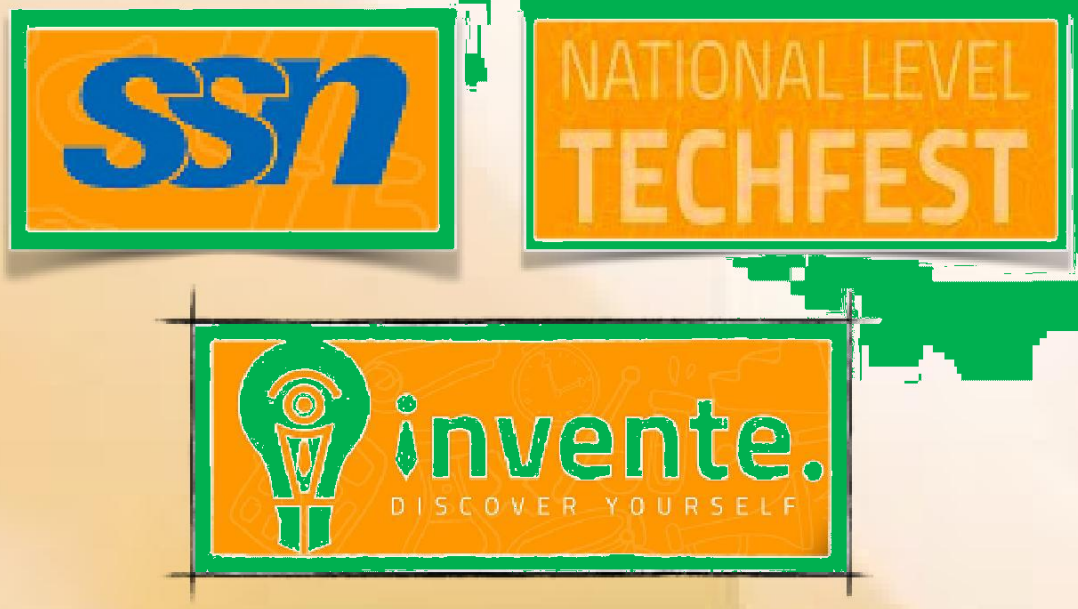
L – R: Rakshitha, Sriraghav, Dr.A.Chamundeswari, Mr.Dakshinamurthy, Mr.V.Balasubramanian.

Visit To Cognizant Technology Solutions

On Saturday, the 20th August, the Second year students of CSE were taken to CTS for a Visit. The Batch assembled at the Department by 8.15 and off we were to our very first Industrial Visit. We arrived at the Campus and cleared security around 10 A.M. After which, we were split into groups. Preemptively, 10 groups were formed, each with topics ranging from Big Data and IOT to comedy skits of us ten groups, 2 sets were formed as we were taken to CTS Academy. I was in the latter set. After the split-up, we were directed into different rooms and confronted the 3rd Years of St. Joseph's.

We started off with a fun interactive session with our peers, after which we were provided refreshments. After refreshments, we reached the climax of the short trip. The 5 topics prepared by us were then presented as a competition between us and St. Joseph Students – a presentation on IOT and Big Data, a comedy skit, a business model, a skit themed around a social cause, and adzap. After the roundup of all the presentations, we were given feedback on how we presented that day. Finally we had lunch and returned to college.

S.Gajesh, II yr – CSE - B



DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

The First version of SSN Technical Festival ***'Invente'*** was held on 9th and 10th September, 2016 in a phenomenal manner. The National level technical symposiums of all the eight departments amalgamated to form this massive technical festival. It was a platform built around encouraging budding engineers to showcase their talents with unbridled enthusiasm. Totally there were 68 events and 4 workshops with 8 lakh prize money.

The Chief Guest for the fest was Dr.M.S. ANANTH, Professor and Former Director of IIT Madras. He gave a presentation on Research and Innovation at the Institutions.

Office-bearers of the Association of Computer Science Engineers:

R Subatheesh	***President***
Akshay R	***Vice President***
B Prathema	***Secretary***
Aishwarya T	***Joint Secretary***
K Sri Raghav	***Treasurer***
R Vijayaraghavan	***JointTreasurer***


TECH VIBE
TECH VIBE
TECH VIBE


SSN


INVENTE

Invente – CSE Events

ONLINE CODING:

The online coding was held on 3rd September, 2016 at 9:30 PM.
Platform: Hackerrank
No. of Signups (Registrations): 206
No. of logins (Participants): 178
No. of Users who submitted the code: 86

The contest was open to all colleges across India. The link to the contest page was given only to current college students. The contest consisted of 6 questions of increasing difficulty levels, for which 150 minutes were allotted. Two teams were declared as prize – winners.

Events on the First Day - 9th September, 2016

POSTER DESIGN:

This event consisted of two rounds: Prelims and Final round. It is a team event with maximum of three per team. Time limit for the event was one hour and internet access was allowed. In prelims, the participants were asked to design a poster from four different questions. In the finals, the participants were asked to design a brochure. There were a total of 168 registrations forming 57 teams.

PAPER PRESENTATION:

This event was specific to computer science domain. Maximum of three authors were allowed to present their work. Only original research work was accepted and plagiarism was taken very seriously. Parameters for judging were originality, novelty of the idea, feasibility of implementation, technical knowledge and communication skills. A total of 165 papers were received, from which ten papers were short-listed for presentation.

CODE HUNT:

The first round was a treasure hunt combined with coding. Teams of 2 or 3 were split to hunt for clues which carried the pass-codes for the code input. There were three batches of preliminary rounds, 45 minutes each. The final showdown consisted of both coding and reverse coding. Participants were given 90 minutes to complete their tasks. There were a total of 134 participants for this event.

Events on the Second Day - 10th September, 2016

SCITECH QUIZ:

This was a general Science and Technology quiz .The questions were from the latest developments in the world of technology. This was a team event with 2 or 3 participants per team. There were 2 rounds. A prelim was a written test with 25 questions. The finals comprised of four rounds, two standard bounce-pounce and two written theme rounds. A total of 98 teams comprising of 204 registrations participated in the event.

TRIATHLON:

It was a team event with not more than three per team. Usage of internet was not allowed. Prelims had a mixture of technical mcq's, fill in the blanks, few aptitude questions and the finals had the coding and reverse coding simultaneously, participants had 2 hours to complete with a constraint of completing one question from each section. One hundred and fifty-five teams participated in the event.

CODOLYMPIC:

This event was sponsored by Amazon. **Winners were given internships at** Amazon.

This was a team event with two members per team and the usage of internet was not allowed. It had three rounds.

Round 1 had fill ups, output generations, debugging questions and four codes to be solved in 1.5 hours to check the implementation skills of the participants.

During Round 2, the teams were given long coding questions in Hackerrank platform which involved the concepts of dynamic programming and trees. The duration of the round was 2 hours.

During Round 3, the participants were tested with advanced coding questions for 2 hours.

amazon

SEQUEL:

This event involved designing a database, writing nested queries, procedures, triggers, functions based on the given schema and constraints. This was a team event with maximum three members per team. It had two rounds, prelims and finals. Prelims had 20 MCQs with a duration of 15 minutes. The duration of the finals was 2 hours and it involved complex SQL coding questions.

Total No of Participants: 123

PROTOCOL:

This was a networking event, so the participants were expected to know the basic working of computer networks. This event had three rounds.

Round 1 had MCQs on Networks.

Round 2 had hands on problems on network debugging and routing.

Round 3 had hands on hacking problems; the participants were expected to hack SSN wifi. **Total No of Registrations: 255 (115 teams)**

Finally, the winners were given the cash prizes at the valedictory function by the Head of the Department of Computer science, Dr. Chitra Babu on 10th September at 4 PM at the CSE Seminar Hall.

CONFUSING PASSWORD??!!

I was in a couple's home trying to fix their Internet connection.
The husband called out to his wife in the other room for the computer password. "Start with a capital S, then 123," she shouted back. We tried S123 several times, but it didn't work. So we called the wife in.
As she input the password, she muttered, "I really don't know what's so difficult about typing Start123!!!

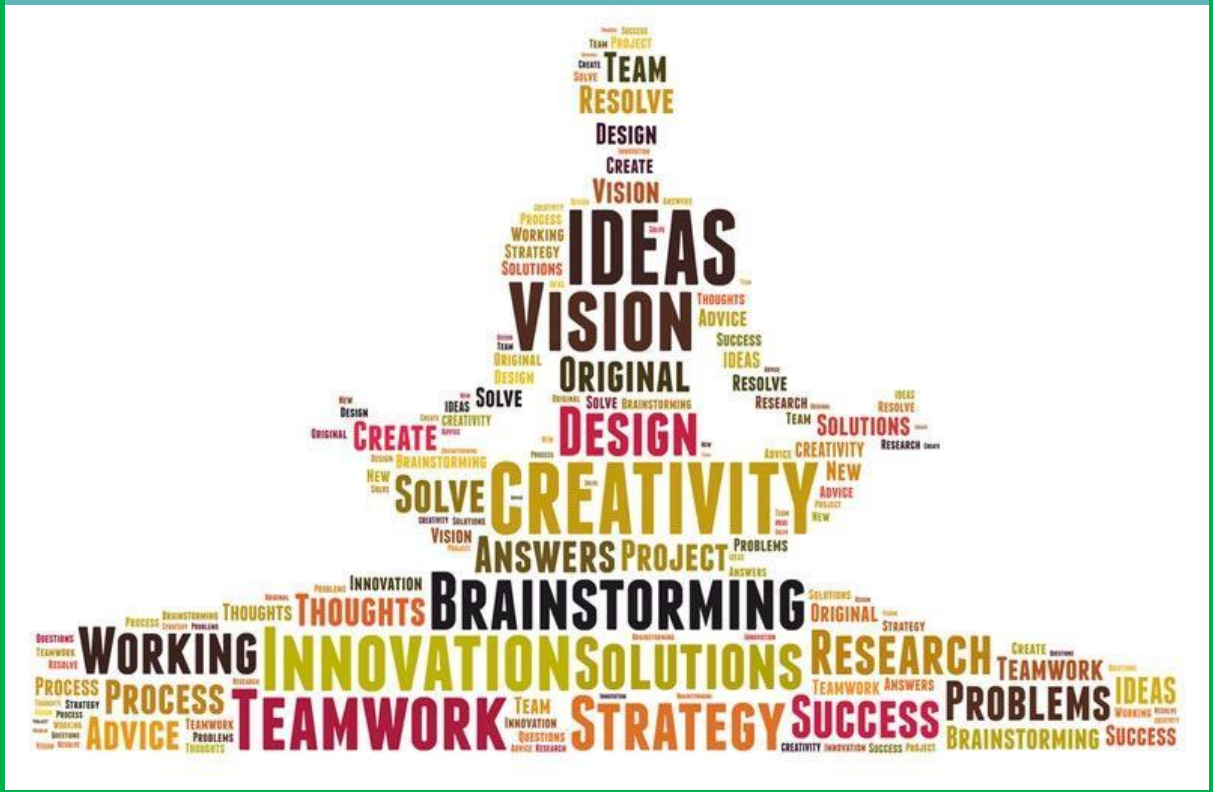
Industrial Visits

Industrial Visit Of Post Graduates

Venue: Indian Institute of Mathematical Sciences (IMSc, Chennai)
Ramanujan Auditorium

Date : Aug 30, 2016

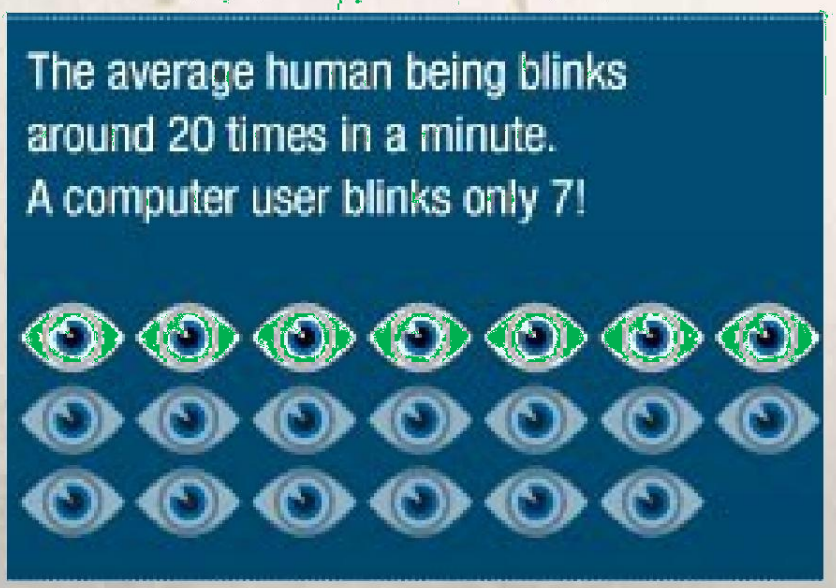
The First and second year post-graduate students from the Department of Computer Science and Engineering visited the Indian Institute of Mathematical Sciences at Taramani, Chennai. They assembled at the Ramanujan Auditorium. The first session was 'Introduction to HPC', handled by Dr.G.Subramoniam, System Administrator at the HPC Data centre. He is a Doctorate in Physics. He gave a presentation on the various clusters and high performance servers that were created and utilized at IMSc since its inception. The students were introduced to Kabru, Nandadevi and other do-it-yourself cluster Linux Supercomputers. He also briefed on the way the speed of computing started at megaflops and is now racing at the speed of tera and petaflops.



This was followed by an interesting session by Dr.Areejit Samal, faculty at IMSc. He gave us an introduction on the unexplored areas of research in Bioinformatics and Computational Biology. He explained two of his latest publications on gene regulatory networks and protein modeling. He also enlightened us on the avenues for summer research internships and research openings for Doctoral and Post-Doctoral studies in that area.

This session was followed by a short break for Tea, following which Prof.Ramanujam addressed the students. He introduced himself and requested the students to give a brief introduction on their area of interest. He then expounded the reason to explore and investigate current research issues and how to effectively search for solutions to the same. It was a very interesting session and students felt motivated to explore problems and unearth innovative solutions through computational methods.

The students were then split into two batches and were taken to visit the HPC Data centre and Library by Mr.Mangala Pandi and Team. Students conversed well with the faculty and cleared their doubts on the security and authentication issues that rise with the servers. The schedule for the day came to a close with lunch. All the sessions were very interesting and motivating and we look forward to many more such Industrial Visits in future.



An Industrial visit was organized by the Computer Science Department of SSN College of Engineering to Tech Mahindra, Shollinganallur on 11th August .A group of about 140 students accompanied by two teachers (Mr.N. Sujaudeen and Mrs.A. Beulah) participated in the Industrial visit. We all assembled at college at 8 am and started around 8:30 am. We reached the place at around 10 am. We were welcomed by Mr Shiv Ajagane & Mr Raghu of Tech Mahindra and were seated at the Seminar Hall. We were given a brief introduction about the company, the technologies they use and the facilities present there.

Mr Shiv talked about the technologies and the practices followed in the company. One such technology used was DAVID, stands for Digital, Automation, Virtualization, Innovation and Disruption. He gave a glimpse about how this strategy was implemented and helpful in the industry. He also said that the company was helping entrepreneurs to develop new projects in their own area of interest. The company had an innovation centre which stood by the projects developed by the entrepreneurs. If the projects were successful, the company will also aid the same and explore opportunities globally. They also supported entrepreneurs to engage in useful projects and in case of any failures; the company absorbed the costs for the same.

Our group was divided into two: one set of students were taken to magic centre and the other on campus tour. The magic centre gave a bird's eye view of various applications developed; one such application was a service booking app, which helped in booking services for vehicles such as cars, etc. They also showed a model developed for airplane systems. During the visit, we were also briefed about the manufacturing domain of Tech Mahindra. We were also given a short note on

various applications, like 3 D printing, which was used in health care services, SAP and ERP applications. Campus tour comprised of amphitheatre, swimming pool, gardens, main buildings, sports court etc. The company also hosts leisure events for its employees, creating a rapport amongst the employees. The technical people can also engage in organizing events and activities to develop skills in the area of Management The company also informed us that the freshers are given training during the training period for about 3- 4 months, which will be covered under different shifts and they are taught various applications that will be used during their employment with the company. The training will cover various aspects in areas which the freshers are hired for. E.g. web development, testing, database management, programming etc.

We were also advised to learn the languages that were used in the industry to help gain competitive edge over the others. The visit was very useful as it had opened our eyes to practical applications and gave us a brief insight on the corporate world. The visit had also given us a new approach to thinking and how actually the theoretical knowledge applies to practical use. We thank our college and staffs for giving us this opportunity and helping us acquire a glimpse of the IT in store for us in future.

Placements

Juspay — Tauseef Ahmed A.

Nationstar — Sujana R, Nikhil.

Temenos — Sabarish, Vidhya, Aiswarya T.

Sirius — Sudhar abishek

Zoho — Saketh, Divya G, Asritha M, Roshini

M. ZoomRx — Sai Veerya , Keerthika.

Fidelity — Archana N, Ajay Venkateswaran, Rajeswari Sujana, Varshitha.

Trimble — Shwetha P

Verizon — Adithya Raman, Vijayaraghavan Rangarajan.

AstraZeneca — Archana M.

Intellect Design (Polaris) — Subashree C, Siby K. S, Swathi.

TCS - CTO — Rekshitha.

Bulk Recruiters:

CTS	**32**
Infosys	28
Accenture	25
Wipro	11

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