

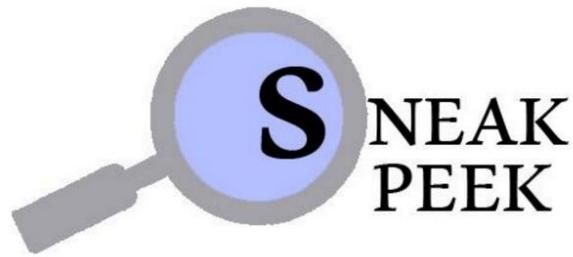
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Smriti

Memory Archives



CSE Newsletter



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H.O.D's DESK



As we move closer to the end of another academic year, it gives me immense pleasure to look back and relish the faculty and student accomplishments over the past 3 months.

We organized an FDP on “Design and Analysis of Algorithms” along with ACM India Education Council. I derived a lot of personal satisfaction and fulfillment by realizing the vision of disseminating high-quality content and also making it accessible to a large segment of the

teaching community. It was a dream-come-true for me to have so many eminent speakers from CMI, IISc, IIT Madras and CEG all in one program. I would like to thank my fellow coordinators Milton sir and Bala for their help in organizing this program.

During this semester, a National conference on IoT and Data Analytics was organized. I appreciate the co-chairs Mirnalinee, Kanchana and Felix Enigo as well as the organizing committee members, Prabavathy, Thenmozhi and Mirunalini, for arranging interesting technical talks and also for providing an opportunity for students to showcase their work in the project contest. There were two workshops conducted in the area of Predictive analytics and Natural language processing. I would like to compliment all the organizers for their creditable efforts.

Satish, Naveen, Naren and Vidyalakshmi won the best-paper award during the day that was specifically intended for showcasing the undergraduate work which has resulted in journal publications. I congratulate all of them for their innovative work. I also would like to appreciate Angel for motivating them.

It was very heartwarming to see a large number of teams participating in the business idea contest that was organized by SSN business incubation centre and AICTE Industry-Institute Partnership Cell (IIPC). I also wish all the outgoing students a fulfilling and rewarding career. I appreciate all the participants and commend the prize-winners and their mentors.

I applaud Mukund Ram on receiving the CTS Best outgoing student award. I congratulate all the students who are heading to IIMs and universities abroad for their higher studies. My best wishes to all graduating students for a bright future.

FACULTY ACTIVITIES

1. **Dr. Chitra Babu** was invited to the inaugural **Shivnadar Foundation Leadership Conclave** that was held at Noida on 13th Feb 2016. She attended the same along with all other HoDs, Principal and the deans.
2. **Dr. Chitra babu** attended part of the Indo-German Spring school on "*Algorithms for Big data*" that was held at IIT Madras on 21st and 22nd Feb 2016.
3. **Dr. Chitra Babu, Dr. Shomona Gracia Jacob, Ms.R. Priyadharsini, Ms.S.Manisha, Ms.Y.V.Lokeswari** organised a One day National level Seminar on "*Predictive Analytics - Big Data and Health Care*".
4. **Dr. Chitra babu** was invited to the second edition of the **TCS HeadStart** meeting hosted by TCS in TCS Siruseri Chennai where HoDS of CSE departments of various engineering colleges in Tamilnadu were brought together to discuss on "*Collaborating for New age engagement with Students*".
5. **Dr.Shomona GJ** delivered a guest lecture on '**Artificial Intelligence**' to the students of IT department at Sairam Intstitute of Technology.
6. **A.Chamundeswari, D.Venkata vara Prasad and V. Balasubramanian** have organized a two day workshop on "*LaTeX Software*", under the banner of SSN-CSI student chapter, during 17-18 February 2016 for CSE, BME and IT department M.E students.
7. **Dr.R.S.Milton, Mr.B.Senthil Kumar, Ms.S.Rajalakshmi** organised "*3rd Workshop on Natural Language Processing*" during Feb 22 and 23, 2016. The workshop was co-sponsored by CSI Student Chapter.
8. **Dr.J.Bhuvana, Mr. B.Senthil Kumar** conducted Hands-on session on "*NLTK for Text Processing*" at 3rd Workshop on Natural Language Processing, SSNCE.
9. **Dr. B. Bharathi** delivered guest lecture on 'Compiler Design' to the students of IT department at Jerusalem College of Engineering, Chennai.

FACULTY ACTIVITIES

10. **Ms.S.Rajalakshmi** along with 3 Third year students attended the "*TechFiesta*" event on March 16, 2016 organized by Capgemini, Chennai.
11. **Dr.A.Chamundeswari** organized a workshop titled "*Version control system using Git*", under the banner of SSN-CSI student chapter, on 23 March 2016 for CSE, BME and IT department students.
12. SSN-ACM student chapter organized a talk on "*Boole and Computer Science*" by **Prof. Madhavan Mukund** of Chennai Mathematical Institute on 4th March 2016.
13. SSN-ACM student chapter organized an on-site programming contest "*Code County v4.0*" on 17th March 2016. This is one of the flagship events that has been organized fourth time in a row, since the inception of the chapter.
14. SSN-ACM student chapter and SSN Design Club jointly organized a workshop on "*Design Meetup*" on 30th March 2016.

Supervisor Recognition



Dr. A.Chamundeswari was recognized as a supervisor for guiding Ph.D and M.S (By research) of Anna University under the faculty of Information and Communication Engineering.

GUEST LECTURES



Dr. Shomona Gracia Jacob delivered a guest lecture on '**Artificial Intelligence**' at the **Institution of Engineers (India)** Sponsored Teaching Programme organized by the **Department of Information Technology** at **Sairam Institute of Technology**. The programme was attended by the students and faculty of the IT department on 17th February, 2016. The presentation covered topics on Knowledge Representation and Reasoning pertaining to Units II, III and IV of the Anna University Syllabus.



Dr. B. Bharathi delivered guest lecture on '**Compiler Design**' to the students of IT department at Jerusalem College of Engineering, Chennai on March 7, 2016.

JRF Recruitment

The recruitment interview for the post of Junior Research Fellow in the DST-SERB project titled "**Investigation on the effect of gene and protein mutants in the Onset of Neuro-Degenerative Brain Disorders (Alzhiemers and Parkinson's disease) : A computational study**" was convened on 01-03-2016 at 1:00pm. The members of the Interview panel included **Dr.Athi Narayanan. N** from the Department of Biotechnology, IIT Madras, **Dr.Chitra Babu**, HOD /CSE and **Dr.Shomona GJ – PI**.

The candidates were evaluated based on their presentation and technical skills. **Ms.R.Athilakshmi** was selected and she has joined duty on 14-03-2016.

Shiv Nadar Foundation Leadership Conclave

Shiv Nadar Foundation(SNF) had organized the very first leadership conclave at Noida with an objective to bring the leaders of various organizations under its umbrella viz. HCL, SSN, SNU, Vidya Gyan, Shiv Nadar Schools, Shiksha and Kiran Nadar Museum of Art , so that it helps in getting to know each other and facilitates future interactions.

Ms. Roshni Nadar Malhotra addressed the crowd by briefing the idea behind organizing such a conclave and what she hopes to achieve by this. The message is that the leader of each organization under the SNF has some unique strong point and if they all come together by pooling their strengths, greater heights can be achieved.

Three talks by Dananjaya Hettiarachchi – an internationally acclaimed motivational speaker, Anish Andheria, President, Wild Life Conservation Trust and Actor R, Madhavan followed Roshni Nadar's initial address. Presentations were also given by people who lead each of the institutions under SNF. This helped in knowing about the other schools, SNU which are also managed under the same foundation. Interactive drumming and Zumba dance sessions also provided entertainment to people in between. Finally, Dr. Shiv Nadar addressed the gathering and suggested everyone to continue the interactions actively beyond the conclave.





Dr. Chitra Babu
HOD, CSE

FACULTY PUBLICATIONS

1. **Ms. B Prabavathy, Dr. Chitra Babu and Subhadevi M** have published a paper titled "*Improving read throughput of deduplicated cloud storage using frequent pattern-based prefetching technique*" in The Computer Journal, March 18, DOI: 10.1093/comjnl/bxw013 (Online Version)
2. **Ms.S.Manisha and Dr. T. Sree Sharmila** presented a paper titled, "*Classification of Text Frames in Video using Fuzzy C Means*", in the conference "ICEECE'16", at Vivekanandha College of Engineering for Women, Thiruchengode.
3. **C. Sivarajanai and B. Bharathi**, "*Syllable based continuous speech recognition for Tamil language*", International journal of advanced engineering technology, Vol.7, pp.1-4, March 2016, E-ISSN: 0976-3945.

FACULTY PUBLICATIONS

4. **S.Kavitha** and **K.K.Thyagarajan**, published a paper titled "*A Survey on Quantitative Metrics for Assessing the Quality of Fused Medical Images*" in Research Journal of Applied Sciences, Engineering and Technology, 12(3), February 2016, pp: 282-293, ISSN: 2040-7459, DOI: 10.19026/rjaset.12.2335
5. **S.Kavitha** and **K.K.Thyagarajan**, published a paper titled "*Efficient DWT-based fusion techniques using genetic algorithm for optimal parameter estimation*" in Soft Computing, January 2016, ISSN: 1432-7643, DOI: 10.1007/s00500-015-2009-6(online version)
6. **S.Kavitha** and **K.K.Thyagarajan** published a paper titled "*A Survey on Quantitative Metrics for Assessing the Quality of Fused Medical Images*" in Research Journal of Applied Sciences, Engineering and Technology, 12(3), February 2016, pp: 282-293, ISSN: 2040-7459, DOI: 10.19026/rjaset.12.2335
7. **Srika Sumi, S.Manisha** and **Dr.T.Sree Sharmila**, presented a paper titled, "*An efficient Text Extraction and Recognition Approach for Images using Bayesian Classifier*", in the conference "**ICEECE'16**", at Vivekanandha College of Engineering for Women, Thiruchengode.
8. **Manisha S., Revathy, Akalya** and **Roshini** published a paper in the journal Advances in Natural and Applied Sciences, titled "*Detection and Recognition of Characters in License Plates*" through the conference EEICC 2015.
9. **Sudarshana Bhavani Narendiran, V.Pavithra, A.Pushpa, Y.V.Lokeswari**, presented a paper titled "*Preserving Electronic Health Records in Cloud using Attribute- based Encryption and Digital Signature*", in International conference on electrical, electronics and computer engineering ,ISBN : 978-93-81830-95-6 ,March 2016
10. **Sharumathi. K, R.Priyadharsini**, presented a paper titled "*A survey on various image enhancement techniques for underwater acoustic images*", in IEEE International conference on electrical, electronics and optimization techniques, March 2016.
11. **Shivaranjani.S, R.Priyadharsini**, presented a paper titled, "*A survey on inpainting techniques*", in IEEE International conference on electrical, electronics and optimization techniques, March 2016.

An FDP that was close to my heart

Association of Computing Machinery (ACM) India Education Council has been functioning with the following objectives in mind:

- Adapt the ACM 2013 Computer Science curriculum to suit the needs of Indian universities.
- Conduct faculty development programs for the CS faculty
- Restructure CS education in school with a primary focus of nurturing computational thinking in K-12 education

When the idea of conducting FDPs in fundamental subjects of computer science was mooted, it immediately resonated with me. Being one of the key subjects providing the underpinnings of CS, **Design and Analysis of Algorithms** was chosen as the topic for the FDP. We decided to videotape the sessions and make them available in the YouTube with Creative Commons license. We also envisioned that the FDP will have some sessions handled by people from research labs, where they would describe how one or more algorithmic techniques really helped in finding a neat solution to practical problems.

With all these in mind, the FDP was originally slated for the 2nd week of December. I was all excited to get the consent for handling sessions in the FDP from people like Prof. R. Ramanujam. Prof. Venkatesh Raman and Prof. Madhavan Mukund. Then suddenly, on 1st December, when the entire Chennai city was reeling under the unprecedented rain and the consequential flooding, my heart sank. I was nursing faint hopes of going ahead with the FDP on 7th December as planned, but only during that night, the reality dawned on me. With a heavy heart, I had to cancel the FDP.

Later, once the repercussions of the flood and its aftermath were sorted out, I once again contemplated the possibility of rescheduling the FDP in January. However, those who had committed for the earlier dates could not say “yes” to the new dates and it was an emotional roller-coaster ride for me. Eventually, when I could again line up speakers from my dream list, I was elated. It was all worth it, when I sat through the sessions of the 5-day FDP. It was a great opportunity to hear the masters teach the topics on algorithms in an engaging manner with a remarkable sense of clarity. The participants expressed their happiness regarding the sessions of the FDP. With the mission accomplished, I derived a great sense of personal satisfaction.

The videos have been uploaded in YouTube. The link is:

https://www.youtube.com/watch?v=Z8izCwEY5qA&list=PLJcH4EGeV8qd9KBMztJJ8pl1j3ZxdI_ab

Dr. Chitra Babu
HOD, CSE

FDP ON DESIGN AND ANALYSIS OF ALGORITHMS

In the month of January, I attended the FDP on Design and Analysis of Algorithms conducted by Department of CSE, SSNCE & ACM Chapter. It was a five day knowledge treat for us from 25 to 29 of January.

The programme started with the discussion on algorithms by Dr. R. Ramanujam from IMSc. He gave an insight into the need of algorithms and how to approach them. He explained the concepts with the basic algorithm for product calculation and stable marriage problem. In the afternoon session Dr. Sayan Bhattacharya from IMSc explained the concepts of “Divide and conquer algorithms”. He explained the concepts with integer multiplication, finding median in a set of numbers.

On the second day Dr. Venkatesh Raman from IMSc gave a talk on “Dynamic programming”. He explained the need for dynamic programming, the concepts with weighted interval scheduling, longest common subsequence, Knapsack problem and TSP. In the afternoon session, Dr. G. Srinivasan from IIT, Madras explained the simplex algorithm, linear programming and maximum flow problem.

On the third day Dr. Madhavan Mukund from CMI gave an introduction to “Greedy algorithms” and described in which applications it gave a better solution. He gave examples on room allocation, earlier deadline first and spanning trees. In the afternoon session Dr. Meghana Nasre from IIT, Madras explained the details in “Bipartite matching and stable marriage problem”.

On the fourth day Dr. Venkatesh Raman from IMSc described the “P and NP problems” and explained the concepts with various examples. In the afternoon session Dr. V. Uma Maheswari from Anna University explained the concepts on “Backtracking, Branch and Bound” with the help of 8-queens problem and knapsack problem.

On the last day, Dr. Sourav Chakrabharthi from CMI gave a talk on “Approximation algorithms”. He explained the necessity of Randomized algorithms and how to approximate them. In the afternoon session, Dr. S. Muralidharan from TCS Innovation labs gave a case study using “Incremental Design”. He explained the concepts using the treasure hunt example.

To summarize, this program gave the details of how to solve a problem and the techniques that can be used to analyze the problem. It also gave information about complexity analysis.

Ms. S. Rajalakshmi, Asst. Prof
Muthuannamalai, II Year



CS PATHSHALA WORKSHOP

As a member of the ACM India Education Council, I was invited to attend the CSPathshala workshop that was held at the TCS Office, Pune on 9th April 2016. Mr. Venkatesh of TRDDC who heads the ACM India Education Council, Prof. Madhavan Mukund of CMI, Mr. Ashwani Sharma of Google participated in the workshop.

Dr. Rajat Moona, Director-General, C-DAC delivered the keynote address. Dr. Anupam Basu from IIT Kharagpur shared his thoughts on how CS education should be revamped in schools. A group of 12 computer science teachers, teaching in premier schools of Delhi, Chandigarh, Pune, Bangalore, Cochin shared their experiences.

There were two parallel break-out sessions discussing how ACM could help in restructuring the K-12 Computer science curriculum and also in building effective local CS teacher communities, conducting teacher training workshops. Google, as a part of its initiative to build a community of CS school teachers, has provided a seed funding to ACM India for supporting these efforts. ACM Pune chapter has roped in 20 schools for piloting the new 5th grade curriculum in the coming 2016-17. Similar initiatives are envisioned also for Delhi, Bangalore, Cochin and Chennai regions.



Dr.Chitra Babu

HOD-CSE

TCS – ACADEMIC INTERFACE PROGRAM

Tata Consultancy Services (TCS) had organized this program on 9th March 2016 at their Siruseri office, as a part of their Academic interface program. 55 HoDs of computer science departments from various engineering colleges in Tamilnadu attended this program. The theme of this meet was “Collaborating for New age Engagement with Students”. **Mr. K. Ananth Krishnan** (CTO of TCS) inaugurated and delivered the keynote address. He talked about the changing expectations of the information systems in terms of reliability and efficiency. He also talked about how the right-brain thinking should be nurtured so that software developers could think on behalf of other entities instead of explicitly looking for requirements.

He also briefed on Rigor in Operations (RiO) where tools, automation, quality improvement and digital platforms for processes become important. He also talked about how digital learning is facilitated in the enterprises through virtual labs, nano modules, gamified learning and assessment as well as video lectures.

Dr. K. Kesavasamy talked about how a new curriculum should be reviewed in a systematic manner. Followed by that, **Ms. Preethy Unnikrishnan**, Head of Talent Acquisition team narrated how TCS is adopting new ways of spotting talent through CampusCommune and the various contest that are conducted such as CodeVita, Testimony and EnginX.

Mr. Hasum Jacob, Head of AI practice, TCS Digital Enterprise talked about Industrial 4.0. In his talk, he highlighted how AI has become a core business for several high profile companies such as Google, Facebook, IBM, Amazon, Apple and Microsoft. He also speculated that, by 2018, the understanding of language and emotions, natural language understanding and digital assistants would progress sufficiently.

Mr. Selvan, EIS Business Head also talked about Industry 4.0, which deals with connecting sensors to software. Sensors in the shop floor have become data sources. Data needs to be dissected, analyzed to make the right decision. He mentioned that such increased influence of right decision made at the right time has pushed mathematics and algorithms to the fore.

Finally, there was a panel discussion on how to go about collaboration for New age Engagement with students.



Dr.Chitra Babu

HOD-CSE



Did You Know?

Project Ara is the codename for an initiative that aims to develop an open hardware platform for creating *highly modular smartphones*. The platform will include a structural frame or endoskeleton that holds smartphone modules of the owner's choice, such as a display, camera or an extra battery. It would allow users to swap out malfunctioning modules or upgrade individual modules as innovations emerge, providing longer lifetime cycles for the handset, and potentially reducing electronic waste.



BUSINESS IDEA CONTEST

Department level **SSN Business IDEA Contest 2016** was conducted by the Department of Computer Science and Engineering, SSN Business Entrepreneurship in Science & Technology (BEST) Centre and in association with the Industry Institute Partnership Cell (IIPC) on 23rd March, 2016. **Mr Arun Prakash**, CTO of Guvi.in judged the event. 18 teams presented their Business Ideas to Mr. Arun Prakash. **Dr Chitra Babu** and **Mr. S. Senthil Velan** organized the event in the department.

Congratulations to all the winners and their mentors!

1. First Prize - Team 7 - *Digital Agriculture using Decision Tree Algorithm*

Anirudh T S, Ashwin Kumar S, Chaaran S

Staff/Mentor: Ms. Angel Deborah

2. Second Prize - Team 13 - *Semi-Automated Wheat Classification System*

Dineshraj Gunasekaran, Brindha Priyadarshini R, Divya Brindha R

Staff/Mentor: Ms. Rajalakshmi S

3. Third Prize - Team 8 - *Digitization of polling booth*

Arvind M, Gayaprasad S, Mageshwaran V

Staff/Mentor: Ms. Angel Deborah

4. Consolation Prize - Team 1 - *Paperless Receipts using NFC*

Sriranjitha R, Shivani K, Nandhini V

Staff/Mentor: Mr. Balasubramanian V

5. Consolation Prize - Team 5 - *Predict2O - An IoT based Intelligent Water Requirement Prediction System for Cultivation*

Hans Krupakar, Dhivya G, Akshay Jayakumar

Staff/Mentor: Dr. Kanchana R

National Conference on Internet of Things and Data Analytics

18.03.2016 and 19.03.2016

- The conference focuses on realizing the vision of Internet of Things, large-scale data analytics and their applications in smart environments like smart city, agriculture, healthcare, etc.
- The conference comprised of four key-note talks, a paper presentation, project contest and live demo of an IoT based project
- 41 participants from SSNCE, Alpha College of Engineering, Rajalakshmi Engineering College, Karunya University, Mepco Schlenk Engineering College, Velammal Engineering College, Sriram Engineering College, RMK College of Engineering registered and participated in the conference.

Keynote Talk 1:

Mr. Sashidar Dongre, Head, IoT and Telecom solutions, L&T Technology services, Bangalore talked on IoT and Analytics. He introduced applications of IoT, explored Industrial IoT (IIoT), and elaborated various types of analytics such as descriptive, predictive and prescriptive.

Keynote Talk 2:

Dr. Karthikeyan Vaiapuri, Scientist R&D, TCS Innovation Labs, TCS, Chennai explained the impact of Big Data IoT in digital world. He put forth the ideas of Drone based applications and visualization models of mobile robots.

Keynote Talk 3:

Prof. Sudip Misra, Department of CSE, IIT Kharagpur gave an interesting talk on Convergence of Sensing, Cloud, and Big Data for enabling IoT. He discussed the following research directions in IoT

- Multimedia sensor networks
- Oceanic force mobility model
- Smart planet
- Reliable and trustworthy participatory sensing
- Self-organizing virtual architecture
- Standardization of protocols
- Integration of social and sensor networks
- Interoperability issues for IoT

Keynote Talk 4:

Mr. Chandrasekaran Vasudevan, Head-Emerging Technology, Innovation and Partnership (ETIP), Ericsson India private limited, Chennai delivered a talk on IoT System Architecture. His talk gave an industrial perspective on IoT and its various architectures. The speaker also elaborated on Smart Rockbolt and Smart alarms in transport application.

Paper Presentation:

21 research papers were received out of which 12 papers were selected for oral presentation. The session chairs for the paper presentation sessions were Mr. Sashidhar Dongre L&T, Prof. R.S. Milton, Dr. B. Bharathi, and Dr. J. Bhuvana, Dept. of CSE, SSNCE. The award winners under best paper category are as follows

	Title	Authors and College
I - Rs 3000/-	Reservation based Smart Parking System	M.A.M. Karthik K.A.M Ajith, SSNCE
II – Rs. 2000/-	Flash flood warning system through IoT using Raspberry Pi	Udhayakumar S Pratheeswaran P Raj Krishna G Rajalakshmi Engineering College, Chennai

Project Contest:

13 entries were received for project contest and 8 projects were demonstrated. The projects were evaluated based on creativity, technical excellence, and applicability. The judges for the contest were Prof. C. Aravindan, Dept. of CSE, SSNCE and Dr. Karthikeyan Vaiapuri, TCS, Chennai. The winners of the contest are as follows:

	Title	Authors and College
I - Rs 3000/-	Smart Parking System using IoT	Archana B Annapurna Sirisha D Jeyasri S SSNCE
II – Rs. 2000/-	IoT based Self-Respiratory Monitoring System for Mepco Schlenk Engineering cronic diseased patients	A. Raji College, Sivakasi

Live Demo:

A project on “A prototype for IoT based Smart Sewage System” was demonstrated to the participants. The project involved a prototype of a set of pumping stations and treatment plant for a sewage system and an automated scheduling of sewage from pumping stations was demonstrated. The work was implemented by H. Naveen, Samiya Nasim, S. Siddhaartha, K. Harikrishna, and Sai Veerya, from Dept. of CSE, SSN.



Organized by

Convener: Dr. Chitra Babu

Co-Conveners: Dr. T. T. Mirnalinee, Dr. R. Kanchana, Dr. V.S. Felix Enigo

Organizing Committee: Ms. B. Prabavathi, Ms. D. Thenmozhi, Ms. P. Mirunalini



Ms.D.Thenmozhi, Ms.P Mirunalini, Ms.B.Prabavathy, Dr.R.Kanchana, Dr.T.T.Mirnalinee, Dr.V.S.Felix Enigo

Did You Know?

HP, Microsoft and Apple have one very interesting thing in common – they were all started in a garage.



WORKSHOP ON VERSION CONTROL SYSTEMS

Speaker: Mr. Sriram (ME)

Co-Ordinator: Dr. Chamundeshwari A

The workshop on version control system was organized by Department of Computer Science and Engineering in partnership with SSN-CSI student chapter on 23rd March, 2016 for CSE, BME and IT department students. The workshop was for 3 hours and consisted of 5 sessions. The main aim of the event being to introduce the audience to the different version control systems in existence and providing hands-on training on the most popular VCS in use now – Git. There were about 40 participants and the audience background was very diverse ranging from undergrads to faculty members. The sessions were highly interactive and simple to follow. The presentation was comprehensive and clearly outlined all the basics one needs to know to start delving deeper into VCS.

Session 1: Introduction to VCS and Git.

Participants were initially given an introduction to all the existing VCS. Git was introduced as the most popular VCS being in use.

Session 2: Getting started with Git

Participants created a Github profile and explored the various tools available at their disposal.

Session 3: Working on Local with Git

Hands-on training was provided for working with Git on a local server.

Session 4: Working with remote server.

Then, the participants moved on working with Git on a remote server.

Session 5: Team work and code conflicts.

Finally, branches and forks of Git were explained and the code conflicts which tend to occur in large projects with multiple collaborators were demonstrated.

With that the workshop came to a close.

Krithika N

Tauseef Ahmed

III Year

LATEX Workshop

CSI Student Chapter

Sriram .K & Sudarshana Bhavani N

February 20, 2016

LATEX is a document preparation system for high-quality typesetting. In other words, the ideal tool for creating presentations and reports, for members of the academic community who are avid researchers. The SSN CSI Student Chapter conducted a 2-day workshop on LATEX on 17th and 18th February, 2016. Organized by Professor Dr. A. Chamundeswari, the workshop was organized for the purpose of introducing students of UG final year, PG final year, and research scholars of CSE, BME and IT to the basics of working with LATEX.

1 Day 1: Software Installation

On the 17th, the session began at 1 PM. Volunteers from PG classes oversaw the installation of LATEX software basics such as MikTeX and LATEX IDE TexStudio on the attendees' machines. After installation, the steps required for updating of packages and configuration of repository in MiKTeX were discussed.

2 Day 2

The hands-on portion of the workshop took place on the 18th and was taught by faculty from the CSE department.

2.1 Overview of LATEX

The first session of the day began at 8:30 AM and was handled by Associate Professor, Mr. S. Senthil Velan. After a brief introduction on the history of LATEX, structure of a basic Tex document was explained. Students then used the commands taught, to create an article with appropriate formatting, using TeXStudio.

2.2 Lists and Figures in LATEX

After a short break, Assistant Professor Mrs. K. Vallidevi began the second session. Under her instruction, we created documents having lists with customization applied according to the user's specification. We then learned how to insert, position and wrap images in a document. An interesting feature implemented was the referencing of images throughout the document, using labels assigned.

2.3 Tables and Mathematical Equations in LATEX

During the third session, Associate Professor, Dr. J. Suresh first guided students through the formatting options available during table creation. One of the main advantages in using LATEX is the provision for writing, numbering and keeping track of equations used. We discovered just how easy LATEX makes it, by including a few of the oft-used formulas into the document.

2.4 Bibliography & Graphic Package in LATEX

While writing technical reports, correctly citing references is a tedious job when using word processors. Associate Professor, Dr. S.Sheerazuddin demonstrated two methods in LATEX for writing a bibliography. The use of TikZ package for drawing images, shading and creating automata was discussed.

2.5 Presentation using LATEX

The workshop finished up with a demo by Professor Dr. R.S.Milton on how to create a presentation using Beamer in LATEX. From using pre-existing themes, to applying concepts from the previous sessions to incorporating some advanced options, the demo served as an apt conclusion to the day.

3 Conclusion

With students busy with upcoming project reviews, this workshop was not only perfectly timed, but was truly useful. Moreover, since students got a chance to practice during sessions, many of the difficulties faced by beginners were addressed by the instructors.



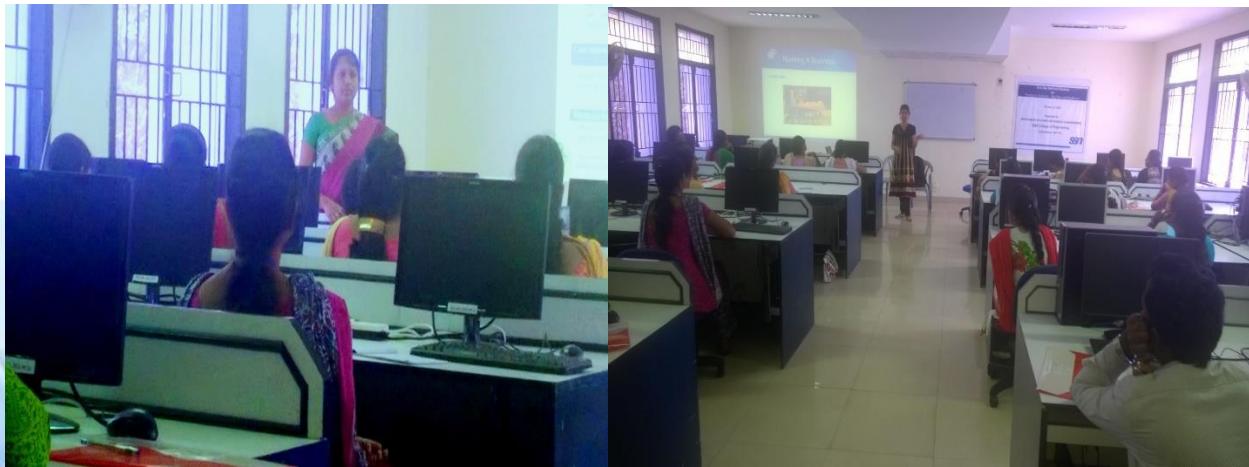


ONE DAY NATIONAL LEVEL SEMINAR ON “PREDICTIVE ANALYTICS - BIG DATA AND HEALTH CARE”

The Department of CSE organized a One – Day National Seminar titled “Predictive Analytics - Big Data and Health Care” on 12-02-2016. The seminar was attended by faculty members, Ph.D research scholars and post-graduate students. The seminar comprised of three sessions. The first session was handled by **Dr.S.Chitrakala**, Asso.Prof/CSE, Anna University (CEG campus). She gave a comprehensive overview of the fundamentals of Big Data and need for Predictive Analytics. Her presentation included many real-time examples and unearthed all the possible avenues for undertaking research in this sphere. The second session included a speaker, one of our own alumni, **Ms.Geetha Manjusha**, Big Data Engineer from Paypal. She gave a demonstration on the software tools for processing big data using case-studies from Healthcare and E-Commerce. Post lunch, the session was handled by **Dr. Bharadwaja Kumar**, Asso. Prof, SCSE – from VIT, Chennai. He detailed all the existing research issues and challenges in the field of Predictive analytics. He initially presented on the Healthcare domain and concluded with the possibility of extending research to various other domains currently being worked on. All the attendees gave a very positive feedback on the seminar and encouraged us to organize hands-on sessions in the future.

Organizing Team:

This seminar was organized by convened by Dr.Chitra Babu, HOD-CSE and co-ordinated by Dr.Shomona GJ, Ms. R.Priyadharsini, Ms. S.Manisha and Ms. Y.V.Lokeswari.



3RD WORKSHOP ON NATURAL LANGUAGE PROCESSING

A series of workshop on Natural Language Processing (NLP) is being organized by Machine Learning Research Group (MLRG) in Department of CSE. This year the “3rd Workshop on Natural Language Processing” was conducted on February 22 and 23, 2016 with the support from CSI Student Chapter.

Natural Language Processing enables communication between people and computers and automatic translation to enable people to interact easily with others around the world. The goal of this field is to get computers to perform useful tasks involving human language, such as enabling human - machine communication, improving human-human communication, or simply doing useful processing of text or speech. What distinguishes language processing applications from other data processing systems is their use of knowledge of language.

Language technology relies on formal models, or representations, of knowledge of language at the levels of morphology, POS tagging, syntax, semantics, pragmatics and discourse. The rise of the Web as a massive source of information, and the increasing availability of wireless mobile access have all placed language-processing applications in the technology spotlight.

The objective of this two day workshop was to provide an opportunity for faculty and researcher scholars to interact with leading persons in language technology, machine translation, data analysis and machine learning areas. This workshop aimed at meeting a growing interest in NLP among the faculty and scholars. It gave them a comprehensive overview of NLP, projects/research related to NLP, and an awareness of the tools for working with NLP tasks.

The workshop was benefitted by 8 faculty and research scholars and 25 students. Day 1 started with the introduction to “Machine Learning Techniques for Text Processing” by Dr.R.S.Milton, Professor, Department of CSE, SSN College of Engineering. It was followed by a talk on “Anaphora Resolution” by Dr.L.Sobha, Member Research Staff, Computational Linguistic Research Group, AU-KBC Research Center. In the afternoon, the session was handled by Dr. M. Anand Kumar, Assistant Professor, Amrita University on “Machine Translation”.

Day 2 started with the hands-on session using Python. “Introduction to Python programming” by Dr. J. Bhuvana, followed by “Python for Text Processing” by Mr. B. Senthil Kumar of CSE department. In the afternoon, Dr. Sourish Das, Assistant Professor, Chennai Mathematical Institute delivered a talk on “Statistics for Text Processing”. The participants expressed that all the sessions were informative and interactive





PhD Viva Voce

Dr. S. Kavitha, successfully defended her thesis entitled "*Classification and Understanding of Multimodality Brain Images using Machine Learning Techniques*" under the supervision of **Dr. K.K. Thyagarajan**, Dean(Academic), RMD Engineering College, Kavaraipettai and was recommended for the award of the Ph.D. degree in the Faculty of Information and Communication Engineering. The public Viva-Voce Examination was conducted on **13.04.2016 (Wednesday)** in the Seminar Hall, Department of CSE, RMD Engineering College along with **Dr. R. Jayadevan**, Associate Professor, Department of IT, Army Institute of Technology, Pune as Indian Examiner and **Dr. R. Bhavani**, Professor, Department of CSE, Annamalai University as Subject Expert member. Nearly 30 members comprising of Teaching Faculties and PG students, attended the viva-voce and witnessed the proceedings.



Did You Know?

1024 Gigabytes is equal to **1** Terabyte.

1024 Terabytes is equal to **1** Petabyte.

1 Petabyte can hold **13.3** years of HD-TV video!

ACM Student Chapter

Annual Report

As the fourth consecutive year of **SSN ACM Student Chapter** comes to an end, we feel really proud that, we have been fulfilling and living by our motto of transforming lives of the computing community from a technological perspective and striving hard towards evolving computing as a science and profession. We as a team have been working really hard in pulling together a lot of events this semester and the fact that many of those events have been happening in a serial fashion since the inception of the chapter, is really intriguing. We would like to thank our HOD **Dr. Chitra Babu**, Faculty Sponsor **Mr. Sujaudeen N** and our active chapter members for extending their help in making all this possible, without them we would have never reached such a successful end, to this year's chapter's proceedings. The major events that we organized this semester, includes, Sci-Tech Quiz, ACM Guest Lecture, Code from Home v2.0, Code County v4.0 and ACM Design Meetup, among others.

We started off this semester with the **Sci-Tech Quiz**, which was organized by SSN ACM Student Chapter in collaboration with the SSN Q! Quiz Club on 13th February 2016. The main objective of this event was to give the quizzing minds and tech geeks an opportunity to experience an amalgamation of both quizzing and tech at one place. This event was hosted by Naveen H (4th Year) from Q! Quiz Club and had nearly 50 participants from CSE, ECE, EEE and Civil departments, across all years.



The Final round of Sci-Tech Quiz

As our next event, we came up with the idea of the **ACM Guest Lecture**, wherein we plan to invite eminent speakers from various streams of academia and request them to deliver a lecture on really interesting topics. This time we invited **Prof. Madhavan Mukund** from Chennai Mathematical Institute to deliver a guest lecture of "**Boole and Computer Science**" on 4th March 2016. We got an overwhelming response from the student community and we witnessed about 150 registrations from across departments.



Prof. Madhavan Mukund lecturing on the topic "Boole and Computer Science" at the Mini-Auditorium

Next up, inspired from various online competitive programming contests and continuing, what we had invented the last year, we organized "**Code from Home v2.0**". This was an online programming contest which was designed with the motto that, anyone who had access to the internet can code from anywhere on the planet and participate in this contest. This contest was hosted at Hackerrank.com from 6 to 10 PM on 27th February and witnessed about 60 participants. There were 4 questions in total, to be solved in 4 hours, the contestant can enroll in anytime during the contest too. There was a really tough competition among the top 10 participants, finally Keshav Reddy from 2nd year CSE won the contest and Vijay and Rithesh Kumar from 3rd Year CSE were the runners up.

Followed by this, we conducted an onsite programming contest "**Code County v4.0**", this is the flagship event of SSN ACM Student Chapter and is being organized every single year since the inception of the chapter and specifically this year was its fourth iteration.

The contest was conducted on 17th March 2016 and witnessed about 100 participants in 50 teams. The contest was split into 2 stages, the first stage tested the contesting teams with rapid fire MCQ's that consisted of questions from various concepts related Algorithms, Data Structures, OS, Networks, etc. Based on the team's performance in first stage, about 6 teams were shortlisted for round two. Where they were given 4 long coding questions to be solved in 3 hours. After serious competition, Keshav Reddy and Roopeshwar from 2nd Year CSE bagged the first place and Prashanth Mahesh from 2nd Year CSE secured the second place.



The winner and runner of Code County v4.0

As the final event this semester, we, in collaboration with SSN Design Club came up with the first of its kind in SSN, **ACM Design Meetup**, wherein we wanted to nurture aspiring young designers at SSN and help them get a career by following their passion for designing. This extends the diversity of events conducted by us at the chapter. This was the first time this event was ideated and hence was limited to just 40 participants to make it more effective for each of them attending it, and was conducted on 30th March 2016. The resource persons for this event were Ruban, Ruthiran, Swaathikka and Pradeep, who have already made a mark in their design careers.



Snaps from the ACM Design Meetup

On a final note, I would like to introduce myself and my team, without whom none of the above events would have even been possible and I should say that every one of us have strived really hard to make the proceedings of SSN ACM Student Chapter a grand success this year. Prof. Madhavan Mukund lecturing on the topic "Boole and Computer Science" at the Mini-AuditoriumThe team: myself, **Satish Palaniappan (Chairman)**, **Srikumar Sridhar (Vice Chairman)**, **Sudarshan R (Treasurer)**, **Senthil B (Secretary)**, **Siddharth G**, **Raghul Asokan**, **Vignesh S**, **Praveen**, **Sockalingam (Technical Team)**, **Subatheesh (Publicity Team)**, **Rajan (Design Team)**. So, this is Satish Palaniappan and team signing off with a team selfie! Wait until



The ACM Team Selfie!

Higher Education Corner

University of Santa Barbara

- ❖ Sanjana Sahayaraj(Ph.D)

Purdue University

- ❖ Sanjana Sahayaraj(Ph.D)
- ❖ Sri Ranjitha (MS)

Arizona State University

- ❖ Shashaank DS
- ❖ Mayanka P
- ❖ Sharath
- ❖ Vishal

- ❖ Srikumar
- ❖ Sruthi
- ❖ Nivetha Thiru

University of Massachusetts

- ❖ Nivetha Thiru

Illinois Institute of Technology, Chicago

- ❖ Sharath
- ❖ Shashaank DS

IIM, Ahmedabad

- ❖ Amrutha Ravi

Ohio State University

- ❖ Sri Vidhya

North Carolina State University

- ❖ Mukundram
- ❖ Naren
- ❖ Srikumar
- ❖ Sruthi

- ❖ Vishal
- ❖ Sri Vidhya
- ❖ Vignesh N
- ❖ Priyanka Ravi

George Washington University

- ❖ Sudharshana Bhavani P

Georgia Tech

- ❖ Bezzam Varun
- ❖ Kiran Sudhir

University of Michigan

- ❖ Kiran Sudhir

University of Southern California

- ❖ Sruthi
- ❖ Nivetha Thiru

Pennsylvania State University

- ❖ Srikumar

SUNY, Binghamton

- ❖ Sharath

New York University

- ❖ Nivetha Thiru

University of Illinois, Chicago

- ❖ Sri Vidhya

University of Texas, Dallas

- ❖ Vishal
- ❖ Sri Vidhya
- ❖ Mayanka P

University of California, San Diego

- ❖ Nivetha Thiru

University of California, Irvine

- ❖ Priyanka Ravi

University of California, Santa Cruz

- ❖ Priyanka Suresh

SUNY, Buffalo

- ❖ Priyanka Suresh
- ❖ Naren
- ❖ Sruthi

North Eastern State University

- ❖ Lakshman R
- ❖ Srikumar
- ❖ Vignesh N

University of Florida

- ❖ Lakshman R
- ❖ Mayanka P

Carnegie Mellon University

- ❖ Sudharshana Bhavani P

TECH FIESTA 2016

The visit to the Capgemini's Tech Fiesta '16 was an interesting and informative one. The main objective behind the visit was to make us aware of the current trends in the industry and expose us to the high end technological innovations incubated by Capgemini. We learnt that Capgemini was not only a Global Consulting Firm, but also one of the forerunners in the field of Information Technology.

The day started off with a discussion with the senior leaders over breakfast. They let us in on the recruitment procedure and clarified our doubts regarding the placement process. They made us privy to what skills they expect and explained to us their research areas as well. Next was the keynote address by Girish Dhanakshirur. He is the current CTO of IBM and a Master Inventor at the IBM Software Labs. He is also the winner of Best of IBM, 2014. His keynote speech revolved around IBM's MobileFirst which is IBM's Mobile Foundation Platform. He spoke of the products and software that they create in his labs. Their brainchild is the IBM Bluemix. IBM Bluemix is an open standards cloud platform for building, running and managing apps and services. It was very informative and gave us a heads up on the nuances of the mobile industry. After his speech, we were taken to a Solution Showcase Booth where we had to vote (Gold, Silver, Bronze) on what we felt were the best solutions. These booths included solutions for various fields like Big Data, Data Analytics, Insurance Solutions, Microsoft Azure, Machine Learning, VMWare, etc. Running through around 10 different booths gave us interesting insights on what the industry is heading towards and exactly what expertise we need to have to equip ourselves for this industry. After this, we broke for lunch.

Post lunch we visited their innovation labs where they used Smart Boards to interact with other Capgemini colleagues around the world. They also showed us their Solutions Environment which had a combination of Montessori plus Data drawings on boards which make their solutions more real to their customers. After visiting their labs, we had an opportunity to attend some workshops conducted by their senior technical team. The eventful day ended with some more interaction with the senior leadership and a vote of thanks. To sum it up, it was indeed a day well spent!



Nikitha
Aishwarya
Janani
III Year
CSE - A

PLACEMENTS 2016

Thorogood Associates

Samiya Naseem

Siddharth S

BA Continuum Ltd, Chennai.

Bharathi Dhasan S

Reshma Thabassum K

Manpreet Thakur

Subbu Lakshmi A

CNS Inc

Risab Thilak P M

UniTech Transfer Gmbh - German Centre for Automation and Robotics

Mohammed Haroon Rasheed

PLACEMENTS 2016

Fuji Xerox

Swaathika

Sarath Vignesh

Huawei, India

Revanth K

Bally Technologies

Arun Pandi

Srilakshmi Annapoorna

Lini Mary

THERE WILL BE MORE THAN YOU CAN TAKE

The announcer said "Best Outgoing Student of SSN presented by CTS"; I walked onto the stage and faced the audience packed with Professors, Heads of Departments, parents and my friends. Flashes of memories from the last few years whizzed through my mind. As I received my prize, I stood there drooling at that beautiful plaque that bore my name.

There will be more than you can take. With our department, you will have a myriad of opportunities that come your way. Guest lectures, projects, internships and competitions make it almost impossible to guiltlessly not make the most of the three years in the department. More than the opportunities offered, it is the ever-flexible and motivating faculty that takes the top spot in the roster of assets for the department of Computer Science and Engineering at SSN.

Today, I bid goodbye to everything that has made me what I am today. And as I march towards greater goals in life, I am grateful to everything that has sculpted me. So to the Head of our Department, to all our faculty and to every stone that builds our department - *Goodbyes are not forever. Goodbyes are not the end. It only means I will miss you, until we meet again.*

- Mukundram
CSE, 2012-2016



This World needs the Unique You

Hi guys! I have been asked to write an article regarding my recent admissions to PhD in Computer Science in US universities. However, I decided to take up this opportunity to share what I feel about our field and the possibilities in it. Before I begin, I have to admit that I've just lived for 2 decades and I am no expert, nor am I wiser than anyone else reading this. However, I can say for sure that the world needs more originals and not more crowd followers.



Rewinding back, I see myself in the 12th grade, preparing hard for the state board exams. To tell you the truth, I took up the biology group in high school, but didn't do very well in the final Biology exam. This resulted in me not being able to get into a medical college in Chennai or the suburbs. So here began my Bachelor of Engineering journey.

I got an admission into an SSN and fell in love with its infrastructure and landscaping at first sight. I was excited. At the same time, I had doubts. Doubts about how I'll be able to do well amongst students who have majored in Computer Science during their high school. The first year was easy to handle. As I entered the department, things seemed to get a bit harder. I tried hard too. There have also been moments where I've lost hope. But, I made it a point to cheer up again and to never give up. A few teachers like Senthilvelan Sir and Shomona Ma'am were a source of support and encouragement to help me do this. All through this time, my love for biology and the inclination towards medical field never died. I started working on projects and papers – which were applications of computer science in the medical field. They made me feel content, for I was able to contribute something from what I had imbibed so far.

I understood that so many useful and unique things can be done with one's knowledge and practice in Computer Science and I decided to explore other domains. Surprisingly, I found them interesting too. Through all this, I've realized that the science in Computer Science stands for the science of analyzing, experimenting and coming up with the right way of solving a problem. The problem can be one that we face in our everyday lives or it can be one that arises once in a while. As long as you look at the right way to solve something and not the fastest way to solve it, believe me, you will feel the 'science' in Computer Science.

It is sometimes sad to think that some people tend to associate computer science students with someone who sits in the corner of a software company and codes a module, without even knowing what that module is going to be used for. Well... I solemnly plead them to think again. A programming bootcamp is more than enough for one to be doing that job. If we have spent 4 years studying Computer Science, we are capable of doing more than that. And we are capable of applying our Computer Science knowledge to something that's close to our heart, to something that sets us apart, to something that's unique and useful. We are capable of applying our knowledge and practice across several verticals to help make this world a better place. Each one of us has a passion, a natural flair and interests. Go for them rather than following the crowd. It's very important to take time and decide what you really want to do. Once you are done with this first and most important step, next start contributing something. It's alright if it's even a very little contribution. As long as each one of us is unique and each one of us keeps doing their part, we will evolve and progress. Don't do things just because your parents want you to do it or your neighbour is doing it or 'the crowd' is doing it. Be right where you are meant to be. And coming back to why I even wrote this article, the above mentioned points are what made me opt for higher studies. I have not yet decided which offer to accept. But wherever I go, I wish to contribute to the research community and to this world. And I will try my best to contribute a lot.

- S. Sanjana

Final year, CSE-B



Did You Know?

The first webcam was deployed at a **Cambridge University computer lab** – its sole purpose to monitor a particular coffee maker and hence avoid wasted trips to an empty pot!

Paper Publication by UG students



The UG student paper presentation was organized by SSN college of Engineering on February 19, 2016 when four teams from the Department of CSE presented their papers that were published in International journals.

The team comprising of **P .Satish, Naren T Kesh, H.Naveen** and **Vidyalakshmi S** were one of the three teams who received the best paper award on the day when students from various departments made presentations on their papers.

The paper is cited as

Satish Palaniappan, Naveen Hariharan, Naren T Kesh, Vidhyalakshimi S and Angel Deborah S. Article: *Home Automation Systems - A Study*. *International Journal of Computer Applications* 116(11):11-18, April 2015.

<http://www.ijcaonline.org/archives/volume116/number11/20379-2601>

Congratulations to the students and their mentor Ms. S.Angel Deborah.

The students received the award from The President, SSN Institutions – Ms.Kala Vijayakumar.

From CAT to IIM Ahmedabad...



To start with, it is a really long process which tests your patience on so many levels. The most annoying part is waiting for the results- it takes around 1.5 months after your CAT for the shortlists to appear and another 2 months after your interviews for final converts.

It is a two-step process,

1. First, you take the CAT.
2. Interviews, if you get shortlisted (based on your CAT percentile, profile etc.)

CAT



To be honest, it is overly hyped. It tests your verbal and quant skills. It is not very difficult. What really matters is how well you use the three-hour time limit (might change this year). Nobody can solve all the questions in the given time limit. With that being said, it depends on how cleverly one chooses the questions. Although there might be a few difficult questions, there is a fair mix of moderate and easy ones. I took almost all the mock tests, mainly AIMCATs. If your scores aren't consistent, it is okay, really. One main thing is to not get emotional with your scores. Trust me, a lot matters on the final day. I prepared seriously for about two months, October and November during our semester study off (thanks to the Chennai floods, university exams were postponed). I had enrolled in TIME classes. Although I didn't attend the classes much, I used their online resources which had mock tests with video solutions and topic wise video lectures. These helped me a lot. Various shortcuts and techniques were covered in the videos.

Interviews

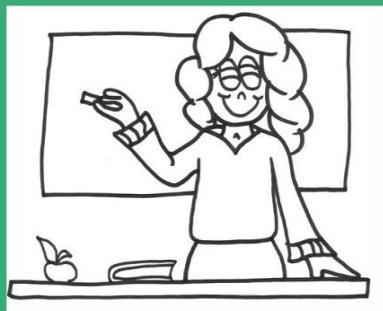
Shortlists are made taking into consideration parameters such as CAT percentile, 10th, 12th, UG scores, work experience, etc. The interview process has WAT (Written Ability Test) and PI (Personal Interview). Most of the IIMs have scraped the GD process, although one or two still have them. The questions asked can be based on academics, work experience, projects, current affairs, general knowledge and random (yes, you read that right). What really matters here is how well you answer than what you answer. They mainly test the student's confidence level, ability to handle stress and the likes. WAT is generally for 15-30 mins wherein you have to write an essay on any given topic and PI is for about 20-30 mins (might go beyond that too).

So this pretty much sums up the entire process.

Shortlisted for IIM Ahmedabad, Bangalore, Kozhikode, Indore and all the new ones. Converted IIM Ahmedabad and IIM Bangalore. Will be joining IIM A.

All the best to the juniors who want to pursue management. :)

Our Team



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$$2+2=4$$



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