Smriti

Memory Archives

CSE Newsletter

Contents

H O D's D E S K

As we usher in yet another exciting academic year, it feels good to consolidate the activities and achievements of our department students and faculty. I am very happy to share with you the news of signing an MoU with Manatec Limited of Pondicherry after our technical interaction with them for more than two years. We also visited the Manatec factory as well as R&D facility to gain more understanding of their business. Hope this helps in furthering the interaction with Manatec. My appreciations to Bhuvana and Bharathi for organizing the Anna University approved Faculty Development Training Program on "Cryptography and Network Security". Congratulations to both Mirunalini and Thenmozhi for successfully defending their doctoral theses.

The expert team visited us for evaluating our M. E (CSE) program for NBA accreditation. As we keep our fingers crossed for the results, my heartfelt appreciation to all the faculty members, especially the PG NBA team – Milton Sir, Shomona and Felix, for their creditable efforts.

It is very nice to see that quite a few students have interned at prestigious places like Brown University USA, Nara Institute of Science and Technology in Japan, Google USA, Amazon, TCS, IIT Madras and IIT Kharagpur. Congratulations to Priya who has been placed in Amazon and Karthik who has bagged an offer from Real Image Media. It is a proud moment for the department that 13 of our students have been placed in various companies with attractive pay packages, less than a week into the placement season. I commend all of them for this unique feat.

It is very encouraging to see that a large number of students in UG as well as PG programs have enrolled themselves in the various NPTEL online Certification courses on both fundamental as well as emerging areas that are being offered during this semester. I thank all the faculty members for actively encouraging the students towards this.

I congratulate all the office-bearers of the Association of Computer Science Engineers. I hope the team works effectively for the combined techfest *INVENTE* which will debut this year.

Let us fill this academic year with achievements galore.

FACULTY PUBLICATIONS

- **Vijay V**, **S. Kavitha** and **Saketh AB** published a paper titled as *"Matrix Sort - A parallelizable Sorting Algorithm"* in International Journal of Computer Applications 143(9):1-6, June 2016.

- **Kavitha S** and **Thyagharajan K.K.,** published a paper titled as *"Survey on wavelet based image fusion techniques"* on International Journal on Recent and Innovation Trends in Computing and Communication, ISSN: 2321-8169, Volume: 4 Issue:5, pp: 466-473.

- **Aravindraj.B**, **Sarath Chandran K.R**. and **Dr. Premanand V. Chandramani** published a paper titled *"Partial Reconfiguration of Variable Size Search Window Motion Estimation"* in the proceedings of National Conference on Research Challenges in VLSI Design and Embedded Systems for Wireless Communication organized by Department of Electronics and Communication Engineering, SSN College of Engineering during Jun 20-21, 2016, pp. 26-30.

- **Sivasankari.S, Shomona Gracia Jacob** published a paper titled *"A Novel Semi-Automated Ontology Construction Framework (SOCF) for Psoriasis Detection"* Pioneering the Psoriasis Risk Assessment Remedy (PRAR) Database, in Studies in Informatics and Control, (Thomson Reuters Indexed IF:0.723 - Annexure 1),Vol.25, No.2, pp.237-244, ISSN:1220-1766

- **Ajay, Ajay Venkatesh, Shomona Gracia Jacob**, *"Prediction of Credit-Card Defaulters: A Comparative Study on Performance of Classifiers"*, International Journal of Computer Applications 145(7):36-41, July 2016. Doi: 10.5120/ijca2016910702

- **Chamundeswari A** and **Baskaran K** published a paper titled "Global Software development: An approach to design and evaluate the risk factors for global practitioners" in the proceedings of 28th International Conference on Software Engineering & Knowledge Engineering, July 2016, pp. 565-68, San Francisco Bay, USA.

- **Ms. Manisha S.** presented a paper titled, "Text Frame Classification and Recognition using Segmentation Technique", in the conference "ICATCCT'16", at SJB Institute of Technology, Kengeri, Bengaluru, India during 21 - 23 July 2016

- **Ms. Beulah A.** presented a paper titled, "Classification of Intervertebral Disc on Lumbar MR Images using SVM", in the conference "ICATCCT'16", at SJB Institute of Technology, Kengeri, Bengaluru, India during 21 - 23 July 2016

PATENTS FILED

- **Kavitha S** and **Thyagharajan K.K.,** filed a patent titled as *"Multimodality Medical image fusion with optimal parameter estimation in disease diagnosis".*

- A Patent has been published, publication no:25/2016, published date: 17/06/2016, application no: 5729/CHE/2015, filed date: 2015/10/26, patentee: **Sathish Palaniappan**, **Naren T Kesh**, **Vidhyalakshmi S**, **Naveen H**, **S.Angel Deborah**. Titled: *"Universally compatible and accessible, software controlled, expandable home automation system for energy conservation and differently abled".*

FACULTY ACTIVITIES

- **Dr. Chitra babu** and **Dr. T. T. Mirnalinee** visited Caterpillar to discuss the potential problems that could be taken up for collaborative projects for the academic year 2016-17.

- **Ms. S.Angel Deborah** attended the FDTP on "Internet Programming", conducted by Department of CSE, Loyola-ICAM College of Engineering and Technology, Chennai.

- **Dr. R. Kanchana** visited Caterpillar for a project discussion.

- **Dr. A. Chamundeswari** reviewed technical papers for the International Conference on Information Science 2016 (ICIS'16). This conference is organized by the Department of Computer Science & Engineering, College of Engineering, Cherthala, Kerala, in association with IEEE. This event is sponsored by the TEQIP-II.

PAPER REVIEWS

Ms. B. Prabavathy has reviewed the papers *"Bloom Filter for Elasticity in DBaaS"* and "A MapReduced Based Hadoop Distributed File System Enhanced Framework to Reduce the Number of Scan Large Dataset" for Fourth International Conference on "Emerging Research in Computing, Information, Communication and applications" (ERCICA 2016).

Dr.Shomona Gracia Jacob, reviewed three papers on *"Sentiment Analysis"*, *"Mining from Adhoc Networks"* and *"Search Plug-in for Information Retrieval"*, in response to the invitation from the Organizing Secretary of International Conference on Informatics and Analytics (ICIA-16), Pondicherry Engineering College, India.

EXTERNAL PROJECTS

Project entitled "Classification and Segmentation of nuclei in Hepatocellular Carcinoma and Dysplastic tumors of Histopathology images" submitted by Ms.K.Lekshmi under the Institutional Ethics Committee, Global Hospitals & Health City, Chennai has been approved as a collaborative work with Pathology department of Global Hospital, Chennai for a duration of 3 years". The budget is under discussion and will be finalized soon.

MoU Signed with Manatec

Manatec Electronics Pvt. Ltd. signed an MoU with SSN College of Engineering. Mr. Thirumavalavan, Senior DGM, R&D along with one of their directors and the Head of the Software Division were present during the signing of MoU.
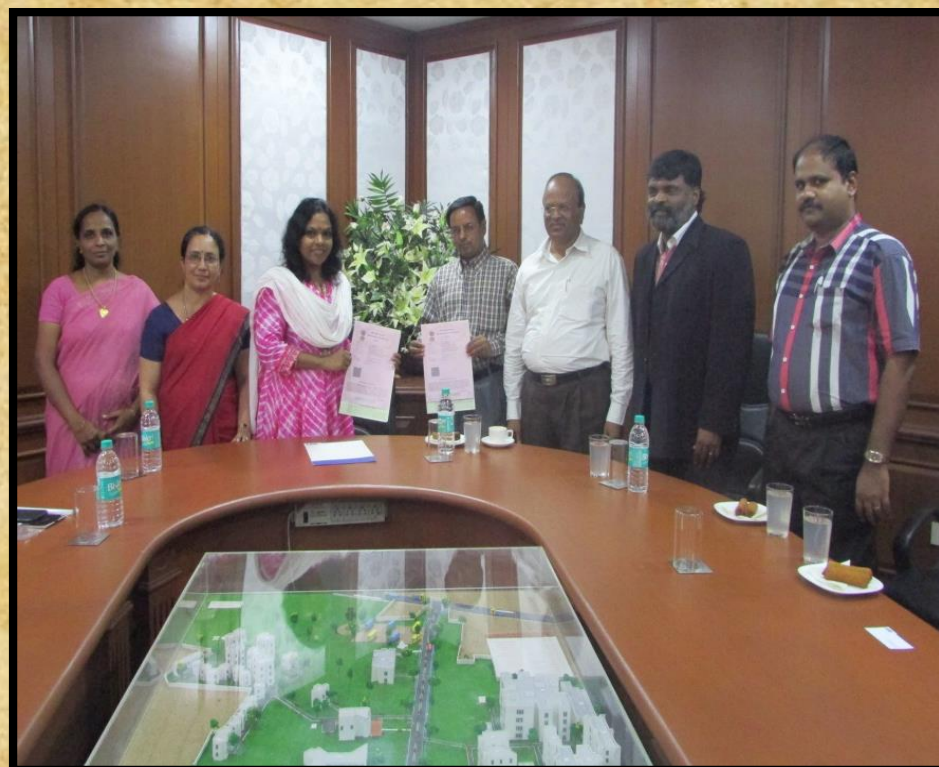
About our visit to Manatec Electronics pvt Ltd

A team of five faculty members along with the Head of Department visited **Manatec Electronics,** Pondicherry on 14th July 2016. We started from SSN at 8.30 am and reached Manatec Electronics R&D center located in Thattanchavady, Pondicherry at 11.00 am. We were welcomed by the Head of R&D department **Mr. Thirumavalavan** at R&D center.

We were taken to Manatec Electronics factory at Karikalampakkam by Mr. Thirumavalavan. At the factory we met the Head of manufacturing. After a short discussion with him, we were guided by one of the managers to see the various divisions in the factory. In the first division, we were briefed about *FOX 3D* wheel aligner. The subdivisions of FOX 3D wheel aligner such as focal length calibration and distance alignment were explained. Then we were led to the testing division. The employees in that division gave a brief description on testing various boards used in FOX 3D wheel aligner, smoke meter, Jumbo 9000 wheel aligner, wheel balancer, etc. Following this we visited the assembling division, where we saw engineers assembling the components on PCB. Next, the manager introduced us to the wheel balancer division. In the wheel balancer division, the engineer demonstrated the working of *WB VL 65 DSP Premium LX* wheel balancer with digital display and *WB VL 65 DSP Premium* wheel balancer with video-graphic display. In continuation to the wheel balancer demonstration, the manager showed and explained about the working of *Jumbo 9000* wheel aligner which operates using Radio Frequency. During the end of the factory visit we were explained about smoke meter and gas analyzer. The engineer enthusiastically explained about how opacity, CO, HC concentration are calculated using the smoke meter and the gas analyzer respectively. After the factory visit, we broke for lunch.

In the afternoon session, we visited Manatec easy drive factory outlet for LCV. We saw various products such as FOX 3D wheel aligner, Diesel smoke meter, wheel balancer, A/C gas charger and tyre changer. The mechanics demonstrated the FOX 3D wheel aligner, the wheel balancer and the Diesel smoke meter. We also saw the Jumbo 9000 wheel aligner in Manatec easy driver factory outlet for HCV.

Finally, we came back to Manatec R&D center at Thattanchavady, Pondicherry. At the R&D center, we had brief project meeting along with the Head of the R&D center and a few members of the R&D team. During the meeting, the Head of the Department Dr.Chitra Babu gave a presentation about the department's infrastructure and research activities following which Manatec's corporate video was played. As a part of ongoing collaboration, the R&D team discussed the current challenges in their Software Development Life Cycle.

Pictures from the Manatec Visit >

LAUNCH OF INSTRA

INSTRA - a Customer Relationship Management (CRM) application for educational institutions on the concept of Cloud Computing developed by *Salem Infotech*. The launch of the software was held at hotel Turyaa, Chennai on 3rd June 2016. According to the company, this app would help in monitoring assigned tasks, performance tracking, managing placement record and alumni. Company claims that it simplifies the task in the academic intuitions and helps institutions to focus on core activities. This app has separate login sections for Student, Staff, Admin and Placement.

In the launch event, **Dr. S. Ganesan** (Registrar, Anna University) was the Chief Guest. A detailed product demo (web and mobile versions) was given by **Mr. Namby Ganapathy** of Salem Infotech.

Dr. Ishari Ganesh (Founder Chancellor, Vel's University), **Dr. A. Gandhi** (Director Placements, Saveetha Engineering College & President, Consortium of TPOs) and **Dr. Swaminathan** (Tyndall Educational Group, Singapore) addressed the representatives of different engineering colleges during the launch.

- *Mr.K.R.Sarath Chandran*

AP/CSE

Training program on cryptography and network security

The Faculty Development Training Program on *"Cryptography and Network Security (CS6701)"* was organized by Department of Computer Science and Engineering, SSN College of Engineering, Kalavakkam, Chennai during 9th June - 16th June 2016.

Dr. B. Bharathi, Associate Professor, Department of Computer Science and Engineering, **Dr. J. Bhuvana,** Associate Professor, Department of Computer Science and Engineering were coordinators for the program.
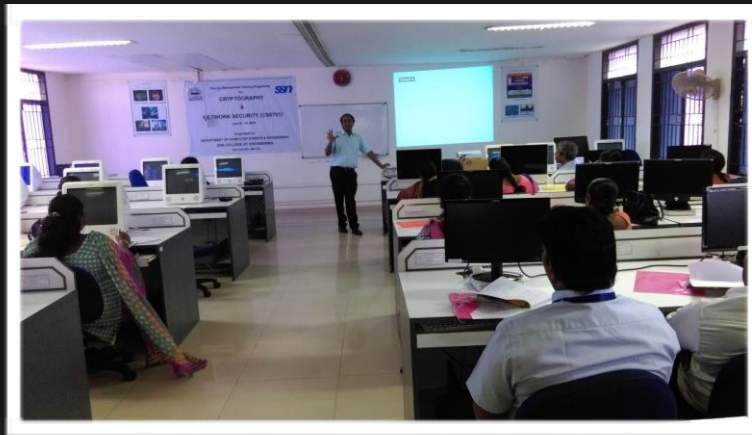
A total of 24 faculties from 19 different engineering colleges attended the training program. The seven days program was divided in to 28 sessions, with two fore-noon and two after-noon sessions which included lecture hours, tutorial and laboratory sessions.

A total of fourteen resource persons were engaged for course delivery out of which four were external.

After formal registration, **Dr. Chitra Babu**, HOD, Department of CSE has welcomed the gathering. **Dr. P. Vanchinathan** Professor of Mathematics, School of Advanced Sciences, VIT, and Chennai, has given a talk on Finite Fields, Number Theory and Chinese remainder theorem. **Dr. N. Shanthi**, Professor & Dean, Department of CSE, Nanda Engineering College, Erode, has handled sessions on Web Security: SSL/TLS and Intrusion detection system. **Mr. Ananada Narayanan,** Enterprise Security and Risk Management Consultant (ESRM Practice), Tata Consultancy Services Limited has covered Advanced Encryption Standard (AES), Blowfish, RC5 algorithm.

Dr. T. Manimegalai, Associate Professor, Department of Computer Applications, **Ms. V. Srividhya,** Assistant Professor, **Dr. T. Sree Sharmila,** Associate Professor and **Dr. S. Chithra**, Associate Professor, Department of IT, have handled various sessions in the FDTP. Our department faculty members who have handled sessions in the FDTP are **Dr. J. Suresh**, Associate Professor, **Dr. J. Bhuvana**, Associate Professor, **Mr. B. Senthil Kumar**, Assistant Professor, **Ms. S.V. Jansi Rani**, Assistant Professor and **Ms. M. Saritha**, Assistant Professor.

Three sessions were scheduled as hands on sessions on GNUPG, KFSensor, Snort. GNUPG was handled by **Mr. V.Ranjith kumar,** Assistant professor, Department of CSE, Jerusalem College of engineering with **Mr. K.B.Sundhara** Kumar, Junior research fellow, Dept of IT, SSNCE. Other two sessions were handled by **Dr. J. Suresh, Dr. J. Bhuvana** and **Mr. B. Senthil Kumar**.

FDP on Effective Programming Skills

A faculty Development Program was organized by Cognizant Technology Solutions Pvt. Ltd. On 28 – May – 2016 at SIPCOT facility at Siruseri. The senior manager of the **Early Engagement Team, Mr. Varadharajan** gave an introduction on the role of the early engagement team in training the students who get an offer letter from Cognizant, to ensure that they are ready for the industry in terms of effective coding. The program was scheduled for three hours from 10.00 AM to 1.30. PM The objective of the program was to insist faculty members on training students in such a way that they would be able to understand the given requirements and code as per requirements in the document. Around 50 faculty members from different Engineering colleges in Chennai participated in FDP. The faculties were given an online test of 30 minutes which had three questions. 1. Jumbled program to put them in correct order as per the coding style. 2. Fill in the boundary conditions for the conditional statements. 3. Identify the incorrect input for the given program. Every question was different for every participant and the final score was announced. The Faculties who secured the top 3 scores were awarded with gifts. The motive of the online test was to get exposed to various forms of questions and to train students for it. These types of questions help students in improving their understanding and avoid bugs when projects go into live

Y. V. Lokeswari

Assistant Professor

1. Jumbled questions will make the programmer to understand the code which is already written and correct the sequence.

2. Filling the boundary conditions will train the programmer to change the loop conditions in future.

3. Identifying incorrect input will train the programmer to validate the code with valid and invalid test cases. Early Engagement team had developed an online platform which provides these different questions to the candidate who takes up test. The application will grade candidates based on skills like Debugging, Logical Reasoning, Problem Comprehension, problem solving and Unit testing. The program made the faculty to get an idea of how to frame questions in order to train students to excel in all the above skills.

PhD Viva Voce

I successfully defended my thesis on *"Detection of Stenosis Based on Automatic Segmentation and Tracking of Coronary Arteries from Computed Tomography Angiography Images"* under the supervision of **Dr. C. Aravindan**, Professor, CSE, SSN College of Engineering. Thesis 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 26.05.2016 (Thursday) in the Seminar Hall, Department of CSE, at SSN College of Engineering in the presence **of Dr. M. A. Joshi**, College of Engineering, Pune and **Dr. S. Sridhar**, College of Engineering, Guindy as subject expert members. I would like to place my sincere thanks to my doctoral committee members **Dr. A. Kannan** and **Dr. P. Thambidurai** for their valuable inputs. I would also like to thank my colleagues for their support in reaching the milestone.

Dr. P. Mirunalini

Associate Professor

PhD Viva-Voce

I successfully defended my thesis on **"A Clause-based Approach for Information Extraction from Unstructured Text and Its Semantic Applications"** under the supervision of Dr. C. Aravindan, Professor CSE, SSN College of Engineering. Thesis 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 27.07.2016 (Wednesday) in the Seminar Hall, Department of CSE, SSN College of Engineering in the presence of Dr. Ashish Ghosh, Indian Statistical Institute, Kolkata and Dr. T. V. Geetha, College of Engineering, Guindy as subject expert members. I would like to place my sincere thanks to my doctoral committee members Dr. L. Ganesan and Dr. L. Sobha for their valuable inputs. I also like to thank my colleagues for their support in reaching the milestone.

- *Dr. D. Thenmozhi*
  AP/CSE

EMBEDDED SOFTWARE DEVELOPMENT WORKSHOP

A workshop on Embedded Software Development was organized in the Java Technology Lab on the 28th and 29th of July, 2016. The workshop was inaugurated by Dr. Chitra Babu, Head of the Deparment, CSE. The workshop was conducted by the CSE Department faculty- Ms. S. Rajalakshmi, Ms. Lakshmi Priya, Mr. K. R. Sarath Chandran and Ms. Angel Deborah. D. Thiagesh and Seshan Rajendran, alumni of SSN, were also present. Thiagesh currently works at Zoho and Seshan is working at GBox. It aimed at kindling the interests of 2nd and 3rd year students in the field of Software Embedded Systems, by providing them with hands on experience in both hardware and software. There was an overwhelming turnout of about 45 students who were divided into teams of 2-4, with each team being provided with hardware components which included the Arduino Boards, Joysticks, Buzzers, and Servo motors to name a few.

The workshop commenced with a brief introduction to Arduino Software and its basic applications. It revolved around the idea of teaching the working of each component followed by developing its application. The first application was the Ambulance light, which was based on the controlled fading of two different colours of LEDs. This was followed by designing a small replica of Traffic Signal lights, which required a push button to initiate the circuit. Throughout the programme, the organizers and volunteers from 4th year paid individual attention to all the teams and ensured that everyone was actively involved. Later, the students were exposed to more thought provoking applications with the help of Light Dependent Resistors (LDR). The organizers also made the workshop more interesting by talking about some of the projects that they had worked on. Post lunch, basic and Servo motors were used to replicate the action of a windshield wiper, taking into account several other constraints. The workshop on day one was concluded with the use of buzzers to create melodies.

The next day started with an exciting application of the joystick, which is used in several gaming consoles. The organizers also provided several library files which they had created for the convenience of the participants. One of the devices that the students also worked with was the Inertial Measurement Unit (IMU) which reports a body's specific force and angular rate, using a combination of accelerometer and gyroscope.

Following the learning process, each team was given the opportunity to work on individual projects, by providing them with the necessary devices. They were small real – life applications, which included Webcam movement, Flappy Bird game, RGB strip light controller, and LED water indicator. All the students enjoyed working on their respective projects and most of them were successful in achieving their target. Prizes were given to the top three teams.
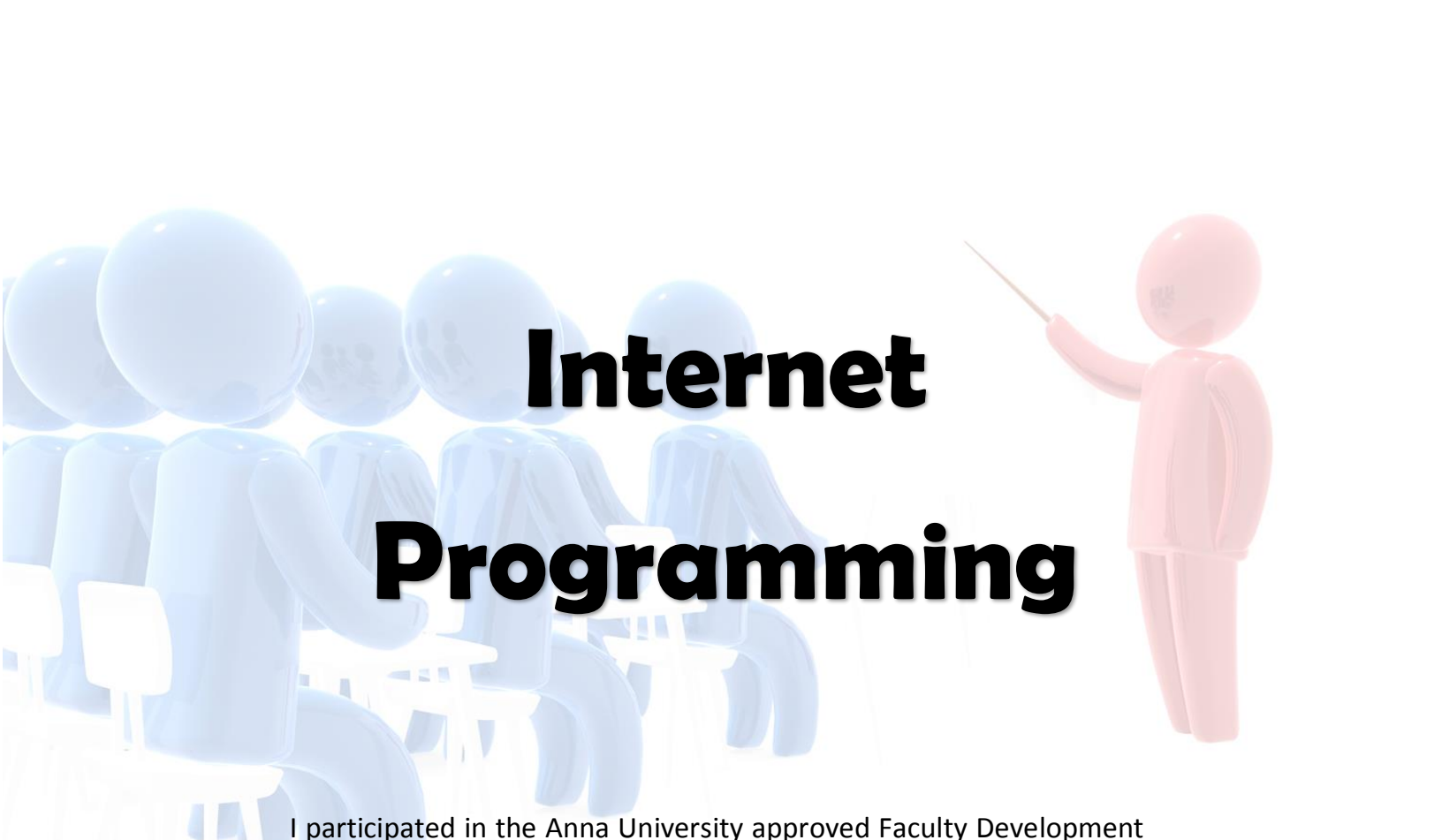
The program received positive feedback from all the students and the effort put in by Thiagesh, Seshan, the volunteers and the teachers-in-charge was commendable. On the whole, the workshop was an amazing experience for all the participants and within a span of two days the knowledge that was gained about Software Embedded Systems was phenomenal.

Pictures from the Embedded Software Development Workshop
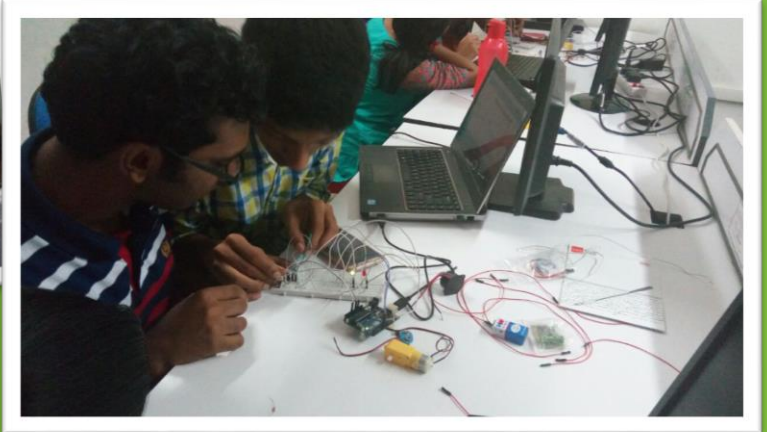
-   R. Nidhi Bhandari
Varsha Bhargavi Dwarakanathan

2nd Year, CSE - B

Internet Programming

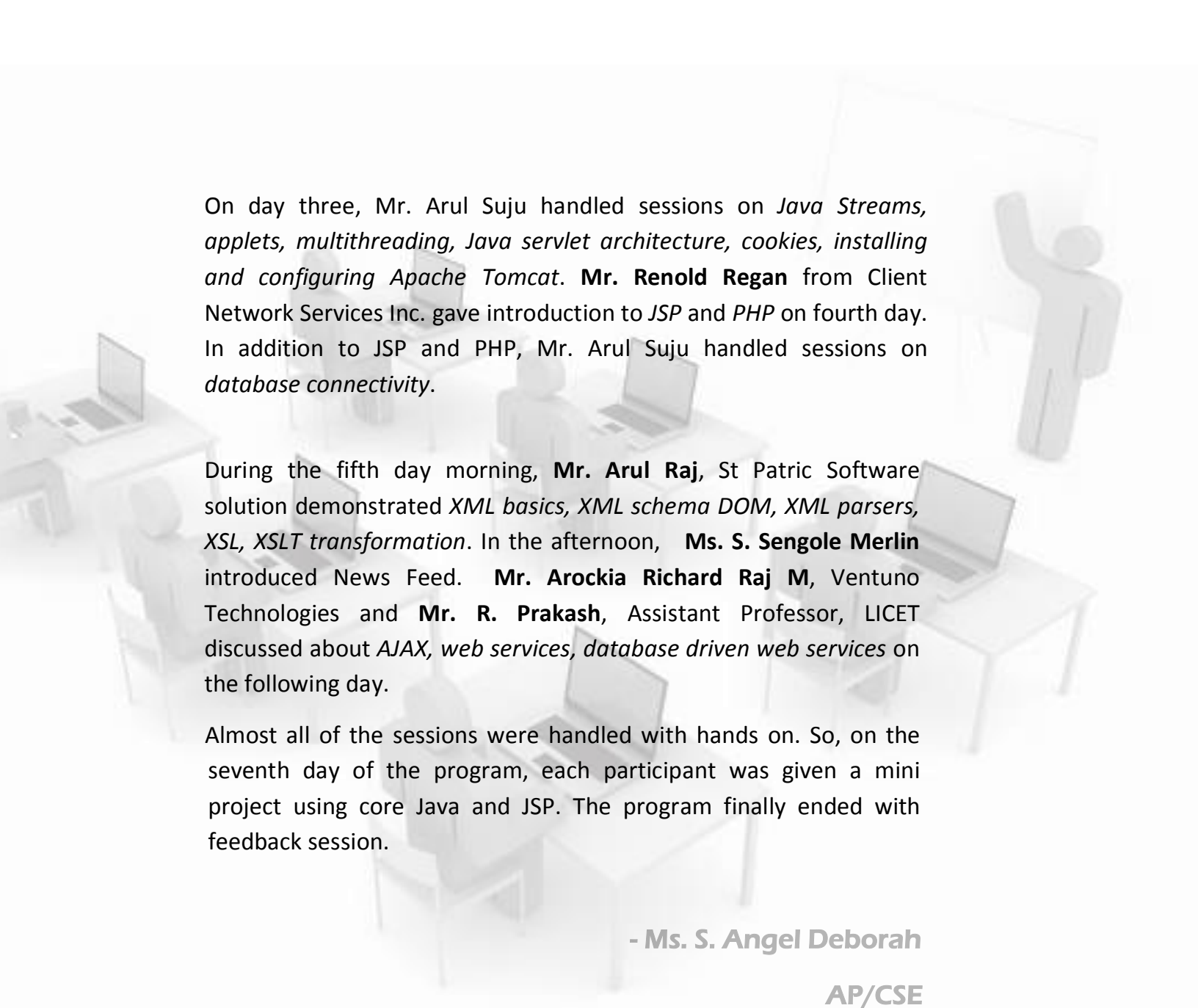I participated in the Anna University approved Faculty Development Training Program on *"Internet Programming (CS6501)"* organized by Department of Computer Science and Engineering, Loyola- ICAM College of Engineering and Technology (LICET), Chennai held during 1st - 8th June 2016. A total of 25 faculties from different engineering colleges across Tamil Nadu participated in the training program.

On 1st of June 2016, the program started with formal inauguration. The Dean, the Rector and the Principal of LICET joined the inaugural. Following the inaugural the Head of the Department, **Dr. K. Gopalakrishnan** delivered the keynote address. The remaining three sessions of the day on *java programming* were handled by **Mr. D. Arul Suju**, Assistant Professor, LICET. During second day, sessions on web 2.0, HTML and CSS were handled by **Ms. B. Prabha**, Assistant Professor, LICET. In continuation to it, Mr. Arul Suju introduced *JavaScript, JavaScript DOM model, exception handling, event handling with DHTML* in the afternoon session.

On day three, Mr. Arul Suju handled sessions on *Java Streams, applets, multithreading, Java servlet architecture, cookies, installing and configuring Apache Tomcat*. **Mr. Renold Regan** from Client Network Services Inc. gave introduction to *JSP* and *PHP* on fourth day. In addition to JSP and PHP, Mr. Arul Suju handled sessions on *database connectivity*.

During the fifth day morning, **Mr. Arul Raj**, St Patric Software solution demonstrated *XML basics, XML schema DOM, XML parsers, XSL, XSLT transformation*. In the afternoon, **Ms. S. Sengole Merlin** introduced News Feed. **Mr. Arockia Richard Raj M**, Ventuno Technologies and **Mr. R. Prakash**, Assistant Professor, LICET discussed about *AJAX, web services, database driven web services* on the following day.

Almost all of the sessions were handled with hands on. So, on the seventh day of the program, each participant was given a mini project using core Java and JSP. The program finally ended with feedback session.

- Ms. S. Angel Deborah

AP/CSE

Fun Fact!

＊ Yahoo had a chance to buy Google for 1 million dollars in 1998 but it refused. Recently Yahoo was bought by Verizon for 4.8 bn dollars. And Google's current market cap is 540 bn dollars.

＊ Naming of Hewlett Packard was decided by tossing a coin by David Packard and Bill Hewlett. Apparently Packard won the toss and put Hewlett's name first. That's how it got named as Hewlett Packard and not Packard Hewlett.

GUEST LECTURE ON THREE PILLARS OF ANALYTICS

The first guest lecture of the semester, attended by the B.E 5th and M.E 3rd semester students was presided over by **Mr. Ganesh Sankaralingam**, director of latent view analytics on 18th July 2016.The talk focused on the three pillars of analytics- *Logos, Ethos and Pathos* that describe the logic, integrity and emotion of the analyst respectively.

Mr. Sankaralingam walked the students through the data analytics process in general, explaining the key stages in detail and he also spoke about the qualifications that any data analyst must possess. To be a good analyst, one needs to have an analytical mind; have the right mix of math, business and computer skills; play by business ethics and relate to human emotions well. Mr. Sankaralingam then recommended a data analytics platform named *"kaggle"* to budding data analysts for them to prove their skills.

On the whole, it was a highly informative session for those present, who would have doubtlessly gained some valuable insights into the exciting world of data analytics.

-Simran Modi
3rd year , CSE

GUEST LECTURE ON MACHINE LEARNING

A guest lecture on *Machine Learning* was conducted on 27th July 2016. The venue was the Seminar Hall in Computer Science Engineering block. The resource person was **Dr. Ashish Ghosh** from *Indian Statistical Institute, Kolkata*. It all started with **Dr. Kanchana Rajaram** introducing the speaker to the audience. Mr. Ghosh is a Professor and the former head of the *Machine Intelligence Unit*. He is currently the in charge of the *Center for Soft Computing Research* at the Indian Statistical Institute. He has published more than 200 research papers in various research journals.

The lecture started with the speaker asking the audience to come up with their opinions on *"What is learning?"* After many interesting answers, he explained that learning is acquisition of knowledge wherein we must improve performance by experience. The concept of learning was further described using *"Parking the Car"* example.

Mr. Ghosh left no stone unturned in making the audience understand what exactly machine learning is. He then listed the various types of learning and each of them was explained with enough examples. I am sure that after the guest lecture, the audience have answers for questions like *"What a perceptron is?"* etc. At the end, **Dr. Milton** handed over the memento to the guest as a token of thanksgiving.

K Sri Raghav
4th Year, CSE

ACE Office Bearers

R Subatheesh
President

Akshay R
Vice President

B Prathema
Secretary

Aishwarya T
Joint Secretary

K Sri Raghav
Treasurer

R Vijayaraghavan
Joint Treasurer

Placement Details

S. No.	Student	Company Placed	Salary
1.	R Priya	Amazon	15.00
2.	MAM Karthik	Real Image	15.00
3.	Akshay S	CodaGlobal	6.10
4.	Mohammed Shakeel	CodaGlobal	6.10
5.	Prasanthi	CodaGlobal	6.10
6.	Sri Raghav K	Dell India	8.00
7.	Praveen R	Dell India	8.00
8.	Senthil B	Dell India	8.00
9.	Sharath Kumar S	Dell India	8.00
10.	Harikrishna	Dell India	8.00
11.	Sivashanmugam	Xome India	8.50
12.	Varna Suresh	Xome India	8.50
13.	Sockalingam	Xome India	8.50

Fun Fact!

* Wipro started as a vegetable oil company in 1947 from an old oil mill founded by Azim Premji's father. Its full form is Western India Palm Refined Oils.

* Its logo is a colourful sunflower indicating old business.

WIPRO
Applying Thought
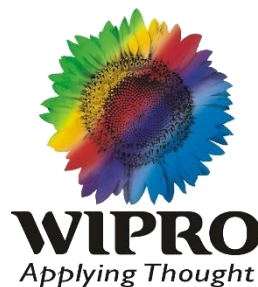
INTERNSHIPS
3rd Year

S. No.	Student	Company / Institution
1.	Aarthe Jayaprakash	Bahwan Cybertek
2.	Aditya Vazhipokkil Manoharan	Likewyss Technologies
3.	Akash Vinay Aditya R	ICF
4.	Akshaya Natarajan	Consul Neowatt
5.	Anjana S	DiacriTech
6.	Arjith N	Ascend Software Solutions
7.	Ashwini Raja	Lucid Software
8.	Avanthikaa Ravhichandran	Lucid Software
9.	Keerthana K	ICF
10.	Keshav T	Amazon
11.	Lohita S	ICF
12.	Nethra Viswanathan	Kadamba Technologies
13.	Nikhilesh M	ICF
14.	Nishant Mathew	Accenture
15.	Prashant Mahesh	Google
16.	Roopeshwar D	Amazon
17.	Thirumla Devi	Ascend Software Solutions
18.	Vishal R	Metavrse

INTERNSHIPS
4th Year

S. No.	Student	Company / Institution
1.	Adithya R	Ripplrr
2.	Ajay V	Gobumpr
3.	Akshay R	Bolt 3D Printers
4.	Ananya Ganesh	Nara Institute of Science and Technology, Japan
5.	Archana N	TCS
6.	Asritha M	Metavrse
7.	Bhavik Shah	SPI Cinemas
8.	Goutham R	TCS
9.	Ishwarya R	SPI Cinemas
10.	Karuppiah N	TCS
11.	Keerthika Rajvel	ZoomRX
12.	Lohith A R	Metavrse
13.	Nikhil S	TCS
14.	Rajan A	WhiteLogic
15.	Rithesh Kumar	Brown University, USA
16.	Rithesh Rohan R	WhiteLogic
17.	Sai Veerya Mahadevan	ZoomRX
18.	Saketh A B	SPI Cinemas
19.	Senthil B	Lucid Software
20.	Sockalingam Rm S	SPI Cinemas
21.	Sujana R	TCS
22.	Thiviya Kalyani N	SPI Cinemas
23.	Vishal T V	Parallel Dots

Internship at E21 Designs

I wanted to spend my semester holiday by interning in a company in the field of big data or web development. Through a friend of mine I got to know E21 Designs. So I submitted my CV and they asked me to come in person to know more about my interests. We had an hour long discussion and I got to know that the company is trying to build its expertise in big data, given the complexity of the subject and as I just had basic knowledge it was mutually agreed that I would take up a training internship.

A week later I received a mail stating that I have been offered an internship in their company for a 2-week period starting from 20th of June. It's been four years since the company was started by a group of young entrepreneurs fresh from college and they currently specialize in creating software for SME, websites and social media campaign. They work with a lot of companies like Britannia, Murugappa, Tata, and so on. They also do work with a lot of companies in the US and Australia.

During my internship period I had undergone training in the following areas, basics of big data, R programming essential and how big data can be leveraged in an organization and I also got the opportunity to see how they deal with clients. Overall it was a great learning experience and exposed me to the fundamentals of big data. This is a vast and promising subject which holds a lot of future for budding engineers like us.

- B. Priyanka
3rd year, CSE-B

Fun Fact!

∗ The first computer mouse was made out of wood. It was constructed by Doug Engelbart in 1964.

∗ If there was a computer as powerful as the human brain, it would be able to do 38 thousand trillion operations per second and hold more than 3580 terabytes of memory.

∗ Intel's name is short for "Integrated Electronics." In addition to microprocessors and other computer hardware items, it has produced digital watches and products for smart cars.

∗ What is the common between Google, HP, Apple and Amazon? – They all started out of a garage.

INTERNSHIP AT BOLT 3D PRINTERS

I worked as a Software Development Intern at BOLT 3D Printers from 7th June 2016 to 15th July 2016. During the period of my internship, I was assigned to work on the development of a slicer for the new 3D Printer (based on the principle of *Stereolithography*) that the company was building.

The slicer is a program that takes a 3D object as input, *'slices'* it into 2D layers and then converts these layers into PNG images. I had to begin by reading the partially implemented code and familiarizing myself with the data structures used. Once I got a grip on that, I started working on implementing a polygon filling algorithm. The initial algorithm I implemented worked well, but was slow. So after it was finished, I worked on optimizing it. I realized the power of optimization when the program execution time was cut down substantially! After this, I began working on the PNG generation module. This was relatively simple to implement but compatibility across platforms was an issue. The module used code meant for Linux and failed to compile on Windows. So I learned to write *'portable'* code and used header-only libraries so that the program could compile seamlessly on all platforms. The last feature that I worked on was hollowing out a solid model. This was a very tricky problem and I spent a considerable amount of time brainstorming with my fellow interns for ideas.

During the course of my internship, I also learned to use tools such as *git* (for version control), *Doxygen* (for documentation) and *VIM* (a powerful text editor). These tools are a boon for programmers and they make the development and maintenance of code a joyful task.

Overall, I had a wonderful time interning at BOLT. The entire team was very enthusiastic and incredibly helpful. I got a hands-on experience of developing a software from scratch and watched it become a complete product.

- **Akshay R**

4th Year, CSE

Fun Fact!

✳ Amazon's warehouses have more storage space than 700 combined Madison Square Gardens.

✳ "Google" officially became a verb in 2006, with its introduction into the Merriam Webster Collegiate and Oxford English dictionaries.

Internship on

Natural Language Processing

This summer, I had the opportunity to undergo a research internship at Nara Institute of Science and Technology, Japan, from 21st June 2016 – 29th July 2016. The internship was in the field of Natural Language Processing and I was supervised by **Professor Yuji Matsumoto.**
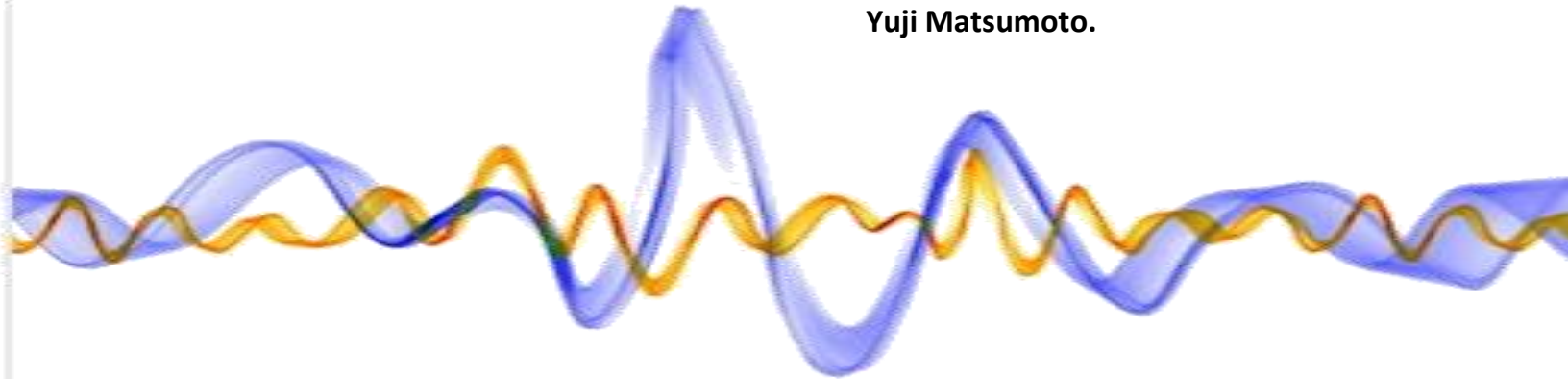
The topic that I worked on is called **Multi-word Expressions (MWE)**. This refers to expressions which are made up of at least two words, but need to be considered together in order to be meaningful. For example, *'under the circumstances'* is an MWE which cannot be parsed word by word, as it would lose its meaning. The lab that I was a part of is working on a project to identify and evaluate MWEs that occur in scientific documents. My task in this project was to determine whether a given MWE is flexible or fixed, that is, if it undergoes any modifications. For instance, an MWE like *'look up'* (as in, look up a word in the dictionary) undergoes internal modifications such as *'look the word up'* as well as inflections such as *'looked up'*, and is thus considered flexible.

Over the course of my internship, I learnt about working with large amounts of text data such as the *Gigaword Corpus* and the *Penn Treebank Corpus*. I had to do a significant amount of programming, mainly involving regular expressions. I also had to read about the current approaches to handling MWE followed by researchers around the world. I also got to learn about tools and libraries used most often in NLP problems.

Overall, it was a great learning experience that gave me an idea of what the research environment looks like. I got exposed to the many unsolved problems in the NLP community and I hope that I contributed something of value over the course of my internship. By interacting with the other students and scholars here, I also learnt a lot about new approaches to familiar problems like Machine Translation. I hope I get a chance to become a part of this community in future.

Ananya Ganesh

4th year, CSE

Google's Android Programming Workshop

Our college is one of the very few colleges in India to be selected by GOOGLE, to conduct an Android Programming Workshop--- 'Computer Science with Android'. It is really commendable to note that Google has chosen our department's final year student, Varna S, to conduct it.

The workshop was a such a catch that the registrations were swiftly filled up on day one unable to accommodate many more interested students. But fret not as the workshop will be conducted even the next semester.

The workshop is scheduled to go on for six weeks (every Saturday, starting 16th of July), each week consisting of activities akin to mini projects. The course makes use of Java Programming, for the functionality and Android Studio for its implementation on android devices.

On the first week, students learnt how to make a simple yet creative app, dealing with anagrams, made very interesting by employing an interactive game model with nothing more than a UI code given as starters to help.

The second week was even more exciting wherein students programmed a die game right from scratch. The upcoming weeks deal with building apps which use more advanced concepts and ideas. But what everybody is looking forward to is what's there on the last week -where the really interesting innovation-filled projects will be reviewed by GOOGLE. The workshop is conducted in our department from 8 am to 1 pm and the pool of participants comprise of students from the CSE and IT departments.

What's different about this workshop lies in its focus. The main aim of the workshop is to impart practical knowledge to the student, not just the typical *"doing it for a certificate"* programme and does not consist of a single boring lecture but rather focusses on learning through interaction, interest and innovation. Concepts of hashing and trees and Dynamic Programming, and even Priority Queues and graph traversing are being covered in this Course. Google will provide certification to all those who complete the projects and attended all the classes, by the end of this course.

Gajesh S and S Aakash,

2nd Year, CSE

Alumni Meet PG NBA 2016

The Expert Committee from the **National Board of Accreditation** (NBA) visited SSN college of Engineering from May 13 to May 15 2016. It was great to have our alumni visit the department for the Alumni Interaction with the Expert Committee. It was very heartwarming to get to know the successful ventures of our Alumni in their career. We wish them the Best in their career path in the years to come!

Fun Fact!

✳ Every minute, ten hours of videos are uploaded on YouTube.

✳ Of the 247 Billion email messages sent every day, 81% are pure spam.

Our Team

Faculty In-charge

Ms. Angel Deborah

Dr. Shomona Gracia Jacob

Editorial

Sri Raghav	**Muthu Annamalai**
Rhea Marian	**Nidhi Bhandari**
Gajesh S	**Siddharth Divi**

$2+2=\cancel{3}\,4$

Design

Akshay Ravichandran

Sudha M R

Selvendran

Shreyas Gopal

Photography

Susanth S

Sharath Kumar