VOLUME: 8
ISSUE: 4

SMRITI

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

SNEAK PEEK

HOD'S DESK

As another academic year begins, I cannot help wonder how all our lives have changed drastically due to Covid-19 pandemic. Today is the college reopening day. I terribly miss the enthusiastic students buzzing around briskly all over the campus. The campus wears a forlorn look with its deafening silence.

However, we will not let this dampen our spirit. We intend to bring the best possible learning experience to the students via online teaching platforms. The faculty members have been trained on the innovative flipped classroom pedagogic approach. Every faculty member will be judiciously deploying this to effectively use the synchronous online sessions more active and learner-centric where students can solve problems in groups. Our management has provided all the necessary infrastructure to realize this.

I appreciate Kanchana for conducting the International workshop in online mode as part of her funded research project which received a wide response from multiple countries. I also appreciate her Valli and Lokeswari for organizing the workshop BigStream for students. I commend Prasad, Bala, Sarath and Sujaudeen for organizing webinars by our final year students to provide placement guidance for the third year students.

I congratulate our student Praveenkumar who is a member of the winning team in the Hackathon organized by Ford. We are very proud of the achievement of our students Mohanasundar, Jyothishmathi and Kandavel whose “StegCloak” software has received wide acclaim in social media and has been lauded by stalwarts in the security domain. Congratulations!

In the current unprecedented challenging scenario, it is very important for everyone to keep the positive attitude. The institute is 100% committed to provide the best possible learning experience to all the students despite the challenges due to physical distancing norms.
Let us keep our spirits soaring high.

Dr. Chitra Babu
HoD/CSE

FACULTY ACTIVITIES

1. **Mr. B. Senthil Kumar** attended various online zoom sessions in the virtual event on 02 July 2020 - Oracle Goundbreakers Yatra 2020 organized by All India Oracle users Group AIOUG. The event was focused on the deep technical sessions on Oracle DBA tracks, Oracle Developer tracks, recent Oracle 19c developments and Java track.
2. **Dr. D. Thenmozhi** attended a DC meeting virtually for the research scholar of Kongu Engineering College on 22 June 2020.
3. Selection process to employ 3 JRFs for the BIRAC funded project was initiated by **Dr. R. Kanchana**. A panel of 2 two PIs **Prof. S. Selvakumar IIIT UNA, and Dr. R. Kanchana along with Prof. R.S.Milton** interviewed the candidates on 17th March 2020 and 4th April 2020 and selected the candidates. An online written / coding test was also conducted prior to the interview.
4. **Dr. Chitra Babu**, convened a meeting on 4th July 2020 with Prof. Ganesh Samudra to discuss the modalities of EFP course and regarding the curriculum revision. The other department curriculum committee members (**Dr. R.S. Milton, Dr. T. T. Mirnalinee, Dr. R. Kanchana and Dr. J. Suresh**) also attended the meeting.
5. **Dr. Chitra Babu** convened a meeting on 18th June 2020 with **Dr. R.S. Milton, Dr. T. T. Mirnalinee and Dr. R. Kanchana**, to discuss the short-term and long-term approaches to implement the EFP course based on the earlier discussions with Prof. Ganesh Samudra. In this meeting, the way of appropriately grouping the electives to offer specialization certificates from SSN was also discussed.
6. **Dr. Chitra Babu** attended the ACM-W India council meeting through Zoom on 26th June 2020.
7. **Dr. Chitra Babu**, initiated the process for the II year CSE students to enroll in NPTEL online courses for which they can later obtain a waiver from professional/open elective courses.
8. **Dr. Chitra Babu,** coordinated the efforts on coming out with a pamphlet for M.E (CSE) admission and also revamping the webpages related to the department.
9. **Dr. R. Kanchana**, got an extension of 7 months for her BIRAC funded research project with which the project's duration extends till March 2021.
10. **Dr. R. Kanchana's**, proposal to conduct a workshop on Artificial Intelligence in the IoT Security Services (AI-IOTS 2020) to run in conjunction with ICSOC (International Conference on Service Oriented Computing) 2020 to be held during December 14-17, 2020 in Dubai, UAE has been accepted.
11. **Dr. D. Venkata Vara Prasad**, as a Board of Studies member of Computer Science and

Business systems(CSBS) program of Rajalakshmi Engineering College reviewed III semester syllabus of B.E (CSBS) on 14th July 2020 .

12. **Dr. D. Venkata Vara Prasad** attended Virtual Board of Studies meeting of CSE department, Sree Vidyaniketan Engineering College, Tirupati on 15th July 2020.
13. **Dr. G. Raghuraman** acted as Expert committee member for the Six Month Research review meeting on 01.07.2020 to provide suggestions to the research scholars during their review presentations at Sathyabama Institute of Science and Technology, Jeppiaar Nagar, Rajiv Gandhi salai, Chennai - 600119, through Zoom Meeting.
14. **Dr. G. Raghuraman**, attended a Doctoral Committee meeting for Confirmation of research scholar, Ms. S. Nandhini of Dr.K. Ashok Kumar, and research scholar Ms. P. Varun of Dr.K. Ashok Kumar,on 03.07.2020 at Sathyabama Institute of Science and Technology, Jeppiaar Nagar, Rajiv Gandhi salai, Chennai - 600119, through Zoom Meeting.
15. **Dr. G. Raghuraman**, attended the First Doctoral Committee meeting for of research scholar Ms. N. Jothi Aruna of Dr.A. Anny Leema, on 09.07.2020 at VIT, Vellore, through Microsoft Teams Meeting.
16. **Dr. Suresh Jaganthan**, attended the Confirmation Meeting for research scholar Ms.Sivasankari of Dr.G.Vadivu on 11.07.2020 at SRM, Chennai through Zoom.
17. **Dr. Suresh Jaganthan,** attended the Confirmation Meeting for research scholar Mr. Arun of Dr C Lakshmi on 27.07.2020 at SRM, Chennai through Google Meet.

EXPERT LECTURES

1. **Dr. D. Thenmozhi** gave a talk on "Healthcare Prospects in Data Science" in a 6 days Webinar series "The 6 Facets of Data Science from 6 Domain Experts" organized by St. Joseph's College of Engineering, Chennai on 5 June 2020.
2. **Dr. Lokeswari Venkataramana,** has delivered a talk on Computational Biology using Machine Learning through Zoom meeting organised by BS Abdur Rahman Crescent Institute of Science and Technology on 22-June-2020.

WEBINAR ATTENDED / ORGANIZED

1. **Dr. Chitra Babu** attended the webinar on "Why does Ramanujan, the man who knew infinity, matter?" by Dr. Ken Ono, Thomas Jefferson Professor of Mathematics, University of Virginia, USA on 4th June 2010 6 PM. This was organized by the Vigyan Prasar of DST as part of the series of lectures to commemorate the centenary death anniversary of the mathematical genius Srinivasa Ramanujan.
2. **Dr. Chitra Babu** attended the webinar on "Using AI to eliminate global lockdowns: An agenda for the post-pandemic era" by Dr. Raj Reddy, Professor of CMU and a ACM Turing awardee, on 5th June 2020 at 6:30 PM.
3. Under the students' branches of IEEE, IEI, ACM and MaxFlow, a webinar talk series on placement and training has been organised for III Year students. The co-ordinators were **Mr. K. R. Sarath Chandran, Dr. D. Venkata Vara Prasad, Dr. V. Balasubramanian and Mr. N. Sujaudeen.**
4. **Dr. D.Venkata Vara Prasad** attended a webinar on "Impact of Electrical Vehicles in post COVID world conducted by IEEE India Council ICNL & ECIM team on 7 May 2020.
5. **Dr. D. Thenmozhi, Dr. P. Mirunalini** attended a Webinar on "Future of AI" hosted by IETE-Mumbai in association with Pantech Solutions on 20 May 2020.
6. **Dr. D. Thenmozhi** attended a Webinar on "Neoskilling for Digital Transformation and AI Revolution" , Presentation by Mr S. Ramachandran, Principal Consultant, Infosys Knowledge institute hosted by IEEE-Madras, ACM-Chennai, CSI-Chennai and Wiley-India on 20 May 2020.
7. A webinar on Challenges in Advanced Automotive Software Systems Validation by **Dr. Arun Adiththan, Researcher, General Motors, Michigan, US** was arranged on 26th May 2020 for the students, research scholars and faculty members of SSN. 77 of them participated. The organizers were **Dr. R. Kanchana and Dr. K. Lekshmi.**
8. **Dr. Chitra Babu** attended the mathematical genius Srinivasa Ramanujan's centenary memorial virtual yatra talk series -1 by Dr. R. Ramanujam, IMSc, Chennai on 19th May 2020 at 11:30 AM.
9. **Ms. A. Beulah and Ms. S. Angel Deborah** participated in the One day National Webinar on "Mathematics in Machine Learning" organized by Department of Mathematics, SSN College of Engineering held on 20 May 2020.
10. **Dr. D. Thenmozhi** attended a Webinar on "Conversational BOT Design" hosted by IETE-Mumbai in association with Pantech Solutions held on 30 May 2020.
11. **Dr. Chitra Babu , Dr. J. Bhuvana, Ms. A. Beulah, Ms. S. Angel Deborah,** participated

in the Webinar titled "Privacy & Ethics in machine learning" on 1st June, 2020 organized by Department of Computer Science, SSN College of Engineering.

12. **Ms. A. Beulah**, attended the Cybertalk Series-2 held on 3rd June'2020, conducted by Department of Information Technology, SSN College of Engineering.
13. **Dr. J. Bhuvana** attended 1 day cyber security workshop on Cybertalk Series - 4 on18.06.20 by IT department, SSNCE , on 18th June'2020
14. A webinar talk on "Low-Code Platforms with a focus on Mendix" to 2nd year,3rd year and final year CSE students has been organized on 9th June 2020 . The speaker was Mr. Hariganesh, Sr. Mgr of Alliances at Mendix, a Siemens business,.USA. The coordinators were **Dr. D. Venkata Vara Prasad, Dr. V. Balasubramanian, Mr. K. R. Sarath Chandran, and Mr. N. Sujaudeen.**
15. **Dr. D. Venkata Vara Prasad** has participated Webinar talk in the title of Role of IOT in Smart City Development" organized by Kumaraguru College of Technology on 10th June 2020.
16. **Dr. R. Kanchana** attended the webinars from GIBS (Gitarattan International Business School, Rohini, Delhi) series 1 on 14th June, 21st June and 28th June 2020.
17. **Dr. D. Venkata Vara Prasad**, has participated Webinar talk in the title of "Technology TowardsInternet of Things – Present and Future on 14-06-2020 In Association with IEEE COMPUTER SOCIETY; COMPUTER SOCIETY OF INDIA.
18. **Dr. Chitra Babu, Dr. J. Bhuvana, Ms. A. Beulah** Attended ACM India Webinar on Education: Computer Science Unplugged and Computational Thinking - What's the Big Picture? On June 27, 2020.
19. **Dr. B. Bharathi** has attended webinar on "Cyber security in COVID 19", VIT Chennai.
20. **Ms. S. Rajalakshmi** attended the webinar on "Benefits of IEEE Membership" conducted by Membership Development Committee, IEEE Madras section on 19th July 2020.
21. **Mr. B. Senthil Kumar** attended the virtual event "Break into Natural Language Processing" on 29th July 2020 with the keynote speech by Prof.Andrew Ng and the panel of members Kenneth Church,Baidu,US, Marti Hearst, Prof, UC Berkeley, Lucasz Kaiser, Google Brain, Younes Bensouda Mourri, AI, Stanford University.

WORKSHOPS/FDPS ATTENDED

1. **Mr. B.Senthil Kumar** virtually attended the various sessions in MongoDB.live conference on Data Modeling, Schema design, Serverless App with Atlas, MongoDB Queries on 10 June 2020. .
2. **Mr. B. Senthil Kumar** virtually attended the Joint Workshop on Graph Data Management Experiences & Systems (GRADES) and Network Data Analytics (NDA), Co-located with SIGMOD 2020, Portland, OR, USA on 14th june 2020. The keynote sessions were by Yizhou Sun, UCLA on "Graph Neural Networks for Graph Search" and by Katja Hose, Aalborg University on "The Web of Data is partially unavailable, so what?".
3. **Mr. B. Senthil Kumar** attended various sessions in the virtual event - Spark+AI Summit 2020 Oragnized by Databricks on 25 June 2020 .
4. **Ms. S. Rajalakshmi, Ms. A. Beulah and Ms. S. Angel Deborah** participated in the Two day Online Faculty Development Program(OFDP)on "R Programming" organised by School of Computer Science and Engineering, VIT, Chennai from 14th May,2020 to 15th May,2020 with the course material provided by the Spoken Tutorial project of IIT Bombay.
5. **Dr. B. Bharathi** attended a virtual conference of ICASSP 2020 during May 4-8, 2020.
6. **Mr. B. Sethil Kumar** attended online workshop on 'Enhancing Research Effectiveness using Scopus, Sciencedirect and Mendeley' organized by Faculty Development Centre, Kurukshetra University on 1st May 2020, under the scheme of Pandit Madan Mohan Malaviya Nation Mission on Teachers and Teaching (PMMMNMTT), Department of Higher Education, Ministry of Human Resource Development, Government of India.
7. **Dr. B. Prabavathy, Dr. V.S. Felix Enigo** participated in 2 days Instructor Led Live Online Workshop on ML & AI using COVID-19 Virus Data Analysis organized by Finland Labs in Association with National Social Summit, IIT Roorkie, held during 9th -10th May 2020.
8. **Dr. B. Prabavathy** participated in 5 days Instructor Led Live Online Faculty Development Program on Artificial Intelligence and Machine Learning using Python organized by Finland Labs in Association with National Social Summit, IIT Roorkie, held during 18th-22nd May 2020.
9. **Dr. B. Prabavathy**, attended a 5-days Faculty Development Program on "Deep Learning for Medical Data Analysis, Visualizations and Predictions" from 1st June to 5th June, 2020 organized by EduxLabs.
10. **Dr. D. Venkata Vara Prasad** attended an Online FDP on "Machine Learning using

Python" conducted by department of Computer Science, School of Computing Sciences, Vels Institute of Science, Technology and Advanced Studies, Chennai.

11. **Dr. Chitra Babu, Dr. D. Thenmozhi, Dr. J. Bhuvana, Dr, B. Bharathi, Dr. TT Mirnalinee, Ms. M. Saritha** attended a 3-day International virtual workshop on Big Data Analytics hosted by SSN and IIIT-Una under BIRAC funded project held during 28-30 May 2020.
12. **Dr. K. Vallidevi, Ms. S. Rajalakshmi, and Ms. S. Angel Deborah** attended the online FDP on "Covid-19 Dataset Analysis using Pandas in Python" during June 5-6, 2020 conducted by Department of Computer Science and Engineering and Humanities and Sciences, Rajalakshmi Engineering College.
13. **Dr. K. Lekshmi,** has attended the Two-day workshop(online) on "Machine Learning using the AWS cloud platform" held on 20th & 21st June, 2020 organised by Psitron Technologies, Bengaluru, Karnataka.
14. **Dr. P. Mirunalini,** participated in the "Web based Faculty development programme on Softcomputing" conducted by School of Information Technology and Engineering (SITE), VIT vellore from 22nd to 26th June, 2020.
15. **Mr. Senthil Kumar**, attended the following talks in SPARK+AI SUMMIT 2020 - A virtual online summit by Apache Spark during 24-26 Jun 2020.
    a) Power of Visualizing EmbeddingsPramod Singh, Bain & Company
    b) Text Extraction from Product Images Using State-of-the-Art Deep Learning Techniques, Rajesh Shreedhar Bhat, Walmart Lab
    c) Building a Pipeline for State-of-the-Art Natural Language Processing Using Hugging Face ToolsLysandre Debut, Hugging Face | Anthony Moi, Hugging Face
16. **Dr. S. Saraswathi,** attended online FDP on "Machine Learning Essential for Every Researcher" from 06.07.2020 to 10.07.2020, organised by Kongu Engineering College, Erode.

PROJECT PROPOSAL SUBMITTED

Dr. P. Mirunalini and Dr. D. Thenmozhi, submitted a proposal titled 'Pandemic Disease - COVID 19 Diagnose and Monitoring Tool to Assist Health Department' to Tamilnadu State Council for Science and Technology. Duration: 18 Months Budget: 4.52 lakhs.

TECHNICAL PAPER REVIEWS

1. **Dr. D. Thenmozhi** reviewed the following papers for SemEval2020, the 14th International Workshop on Semantic Evaluation:
   a. HumorAAC at SemEval-2020 Task 7:Assessing the Funniness of Edited News Headlines through regression and Trump mentions
   b. Ferryman at SemEval-2020 Task 7: Ensemble Model for Assessing Humor in Edited News Headlines
2. **Ms.S.Angel Deborah** reviewed the following papers for SemEval2020, the 14th International Workshop on Semantic Evaluation:
   a. GruPaTo at SemEval2020 Task 12: Retraining mBERT on Social Media and Fine-tuned Offensive Language Models
   b. KEIS@JUST at SemEval 2020 Task 12: Identifying Multilingual Offensive Tweets Using Weighted Ensemble and Fine-Tuned BERT.
3. **Dr. B. Prabavathy** reviewed the paper titled, "Dispatching-Rule Variants Algorithms for Storage Supports Used Spaces" for the Journal Discrete Dynamics in Nature and Society.
4. **Dr. D. Thenmozhi** reviewed the following papers:
   a. Context-Aware Sarcasm detection Using BERT
   b. Neural Sarcasm Detection using Conversation Context for FigLang2020 - The Second Workshop on Figurative Language Processing will be held in conjunction with ACL 2020 conference during July 9, 2020 at Seattle, Washington.
5. **Dr. Chitra Babu**, reviewed a technical paper titled "Deriving and Validating Fault Metric for Object Oriented Systems using Use Case Diagram" for Sadhana - an official journal of Indian Academy of Sciences.
6. **Ms.S.Rajalakshmi,** reviewed the paper titled, "DoTheMath at SemEval-2020 Task [12]: Deep Neural Networks with Self Attention for Arabic Offensive Language Detection" for SemEval 2020- International Workshop on Semantic Evaluation 2020, Barcelona, Spain.
7. **Ms.S.Rajalakshmi,** reviewed the book chapter manuscript titled, "Deep Learning Based Malware Detection and Classification", for publication in Confluence of AI, Machine, and Deep Learning in Cyber Forensics, IGI Global publications.
8. **Dr. B. Bharathi** reviewed the following research papers for the conference Interspeech 2020
   a. Gated Multi-head Attention Pooling for Weakly Labelled Audio Tagging
   b. Uncertainty Vector for Replay Spoofed Speech Detection
   c.Acoustic Scene Classification via Fusion of Classifiers Voting

d.Exploring the Use of an Unsupervised Autoregressive Model as a Shared Encoder for Text-Dependent Speaker Verification

e.BUT Text-Dependent Speaker Verification System for SdSV Challenge 2020

f.The XMUSPEECH System for Short-Duration Speaker Verification Challenge2020

9. **Lokeswari YV** has reviewed a paper titled "MiCS-P:Parallel Mutual-information Computation of Categorical Data on Spark", for IEEE Transactions on Systems, Man and Cybernetics: Systems.
10. **Dr. D. Venkata Vara Prasad** reviewed paper titled ”Prediction of Qualitative Parameters Concentration in the Groundwater Resources using the Bayesian Approach" for International Journal of Environmental Analytical Chemistry.
11. **Dr. D. Venkata Vara Prasad** reviewed paper titled “Enhancing Security in e-learning using Visual Cryptography medical image based on multiple non periodic stegano tiling with lossless recovery” " for Journal of Medical Imaging and Health Informatics.
12. **Dr. B. Bharathi** reviewed the paper titled "Modified Self-training based Statistical Models for image Classification and SpeakerIdentification?" for the journal International journal of speech technology

WORKSHOPS ORGANIZED

1. A 3-day International workshop on Big Data Analytics was organized under the auspices of the funded research project NRP-UniSICMA. The coordinators are **Dr. R. Kanchana** and Dr. S. Selvakumar, Director, IIIT Una, HP.
2. On June 1st, **Mr. Arvind Ram, software engineer, Google, San Francisco , USA** delivered a guest lecture on Privacy & Ethics in machine learning. The event was organized by Department of CSE, SSNCE.
3. **Dr. R. Kanchana, Dr. K. Vallidevi, and Dr. Y. V. Lokeswari,** organized a 2-day National workshop on Stream Data Management and Analytics in Big Data BigStream 2020 on a virtual platform with online Hands-on during 19-20 June 2020.
4. **Dr. Chitra Babu,** organized a session on "Guidelines for administering Open Book Exams" by Prof. R. Ramanujam of Institute of Mathematical Sciences (IMSc) and Prof. Madhavan Mukund, Deputy Director and Dean of Studies, Chennai Mathematical Institute (CMI) for all the SSN Faculty members on 29th June 2020.
5. **Ms S. Rajalakshmi, Ms. A. Beulah and Ms. S. Angel Deborah** organized an online workshop on “Insights into Deep Learning Techniques” on 28th July 2020.

ONLINE KNOWLEDGE BASE

1. **Dr. V. Balasubramanian** has successfully completed the following online courses
   - "Programming for Everybody (Getting Started with Python)" by the University of Michigan in Coursera
   - "Blockchain Basics" by the University of Buffalo in Coursera
   - "Be an Online Tutor in 24 Hours Course" by Hamdan Bin Mohammed Smart University funded by UNESCO Institute for Information Technologies in Education
   - "Design an Online Course in 24 Hours Course" by Hamdan Bin Mohammed Smart University.
2. **Ms. S. Manisha** successfully completed the following online courses
   - "Programming for Everybody (Getting Started with Python)" by the University of Michigan in Coursera.
   - "Python Data Structures" by the University of Michigan
   - "Capstone: Retrieving, Processing, and Visualizing Data with Python" by the University of Michigan
   - "A Crash Course in Data Science" by Johns Hopkins University
   - "Building a Data Science Team" by Johns Hopkins University
3. **Dr. R. Priyadharsini** successfully completed the following online courses
   - "Programming for Everybody (Getting Started with Python)" by the University of Michigan in Coursera.
   - "Python Data Structures" by the University of Michigan
   - "Capstone: Retrieving, Processing, and Visualizing Data with Python" by the University of Michigan
   - "A Crash Course in Data Science" by Johns Hopkins University
   - "Building a Data Science Team" by Johns Hopkins University
4. **Ms. A. Beulah**, has successfully completed the following online courses
   - "Introduction to HTML5 (Completed date: June 23, 2020)"
   - "Programming for Everybody (Getting Started with Python)" provided by University of Michigan in Coursera.
   - Neural Networks and Deep Learning " provided by deeplearning.ai in Coursera
5. **Ms.S.Rajalakshmi** has successfully completed online courses on "Introduction to Recommender Systems: Non-Personalized and Content-Based" provided by Department of Computer Science and Engineering, University of Minnesota in

Coursera.

6. **Ms. S.Lakshmi Priya**, has completed an online course on "Neural Networks and Deep Learning" through Coursera offered by deeplearning.ai
7. **Dr. P. Mirunalini,** has successfully completed online course on "Neural Networks and Deep Learning" authorized by deeplearning.ai in Coursera.
8 **Dr. D. Venkata Vara Prasad** has successfully completed online course on "Be an Online Tutor in 24 Hours Course" by Hamdan Bin Mohammed Smart University funded by UNESCO Institute for Information Technologies in Education
9. **Dr. D. Venkata Vara Prasad** has successfully completed the following online courses in Coursera.
   i. Machine Learning by the University of Washinton
      a. Machine Learning Foundations: A Case Study Approach
      b. Regression
      c. Classification
      d. Clustering and Retrieval
   ii.A Crash Course in Data Science by Johns Hopkins University
10. **Dr. S. Saraswathi,** completed the following 6 courses with certification from coursera
    a.Interfacing with the Arduino
    b.The Arduino Platform and C Programming
    c.Introduction to the Internet of Things and Embedded Systems
    d.Using Python to Access Web Data
    e.Python Basics
    f.Introduction to Cybersecurity Tools & Cyber Attacks
11. **Dr. Suresh Jaganathan** successfully completed online course on "Improving Deep Neural Networks: Hyperparameter tuning, Regularization and Optimization" by deeplearning.ai in Coursera.
12. **Mr. B. Senthil Kumar** successfully completed the online course - Sequence Models - in Coursera by Prof. Andrew Ng, Deeplearning.ai.

FACULTY PUBLICATIONS / PAPER PRESENTATION

1. **Shahul Hamead, and TT Mirnalinee** published a paper titled "Emulation of burst-based adaptive link rates in NetFPGA towards green networking." in Turkish Journal of Electrical Engineering & Computer Sciences 28, no. 3 (2020): 1246-1263.

MACHINE LEARNING USING THE AWS CLOUD PLATFORM

The Two-day workshop on "Machine Learning using the AWS cloud platform " was conducted online during 20 and 21st June, 2020. This workshop was conducted by Mr. SarathKumar, Founder & CEO, Psitron Technologies PVT.LTD., Bengaluru.

AWS has the broadest and deepest set of machine learning and AI services. These are used to solve the toughest challenges that hold back machine learning from being in the hands of every developer. We can choose from pre-trained AI services for computer vision, language, recommendations, and forecasting. And I have been trained on some machine learning methods in AWS to build, train and deploy the same models. The capabilities of those services in AWS are built on the most comprehensive cloud platform, optimized for machine learning with high-performance compute, and no compromises on security and analytics.

The iris dataset which we have used contain metadata associated with data inputs to Amazon ML. It stores a reference to the Amazon S3 bucket location where the input data resides. ML Models in AWS generate predictions using the patterns extracted from the input data. Evaluations measure the quality of ML models. Batch Predictions asynchronously generate predictions for multiple input data observations. Real-time Predictions synchronously generate predictions for individual data observations

The workshop met my expectation and thereby helped me learn how to build, train and deploy the ML models using Amazon S3 and Amazon Machine Learning Services.

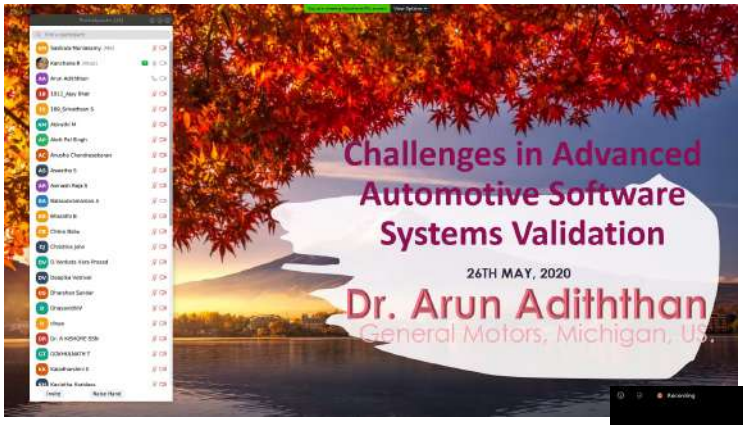
Dr. K. Lekshmi
Asso. Prof. / CSE

CHALLENGES IN ADVANCED AUTOMOTIVE SOFTWARE SYSTEMS VALIDATION

In context of the tremendous progress in semi and fully autonomous driving technology development, this webinar, held on 26th May, 2020, took an elaborate stroll into the subject. Dr. Arun Adiththan, Researcher, General Motors, Michigan, was the speaker. An alumnus of SSNCE, Arun earned his Ph.D. in Computer Science from City University of New York in 2018. His experience spanning across 25 published international papers was evident as he launched into his presentation.

His talk described the commonly used validation techniques and their limitations in wide-ranging driving conditions. Additionally, highlighting potential performance and safety issues arising out of efforts to make the vehicle better over time through updates to critical software components.

The audience included UG and PG Students, Research Scholars and Faculty members, amounting to a total of 67 participants on Zoom. The organizers were R. Kanchana and K. Lekshmi of CSE Department.



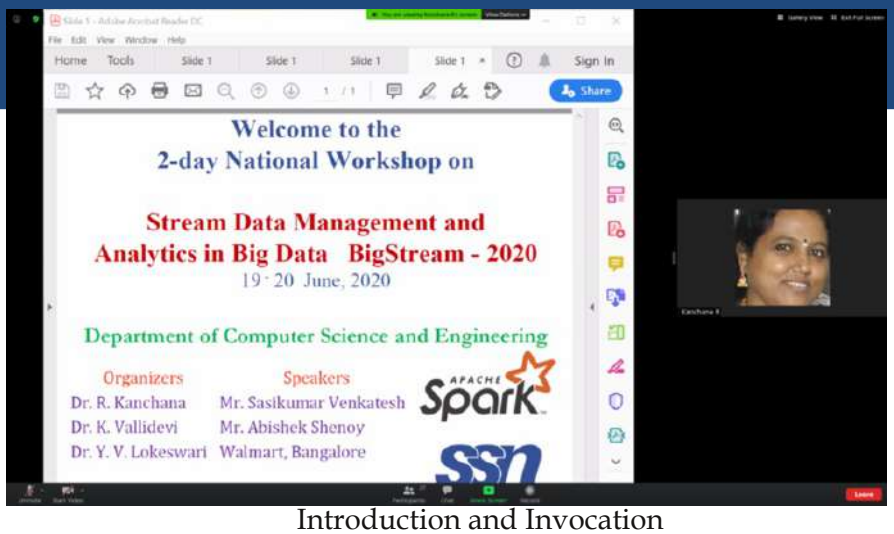
NATIONAL WORKSHOP ON STREAM DATA MANAGEMENT AND ANALYTICS IN BIG DATA

The National Workshop on Stream Data Management and Analytics in Big Data (BigStream - 2020) was organized by Dr. R. Kanchana, Dr. K Vallidevi and Dr. Y. V. Lokeswari during 19 and 20 June 2020 on a virtual platform. The workshop targeted the UG, PG students, research scholars of CSE/IT and Industry professionals. The guests invited for the workshop were Mr. Sasikumar Venkatesh, Software Engineer, Walmart, Bangalore and Mr. Abhishek Shenoy, Software Engineer, Walmart, Bangalore. There were totally 36 participants, which include 1 industry professional, 2 faculty members, 6 research scholars, 1 PG student and 26 UG students.

The workshop covered Apache Spark, Spark SQL, Streaming Architectures, Kafka Streaming, Spark Streaming, and Example Case studies and application development (Hands-on). Hands-on were conducted in Streaming Analytics using Spark, Spark SQL, Kakfa and Spark Streaming using Eclipse IDE. Participants are given exercises to practice in the post lunch session.

The participants were split into seven teams and a mentor was assigned to each team to handle the hands-on sessions online through Whatsapp and Zoom Meeting. This is the first workshop in which hands-on was conducted online. The Whatsapp groups for each team enabled the mentor to reach participants easily to clarify their doubts and issues. The screenshots showing the issue were also shared in the whatsapp group and the mentor was able to guide them to solve the issue. The handouts with step by step instructions for installation as well as practice sessions were also shared with all the participants thus making the hands-on sessions more effective. Topics covered in workshop are as follows.

The workshop stated with invocation followed by welcoming and introducing the speakers. The first session was about current generation Big data Technologies. Mr. Sasikumar briefed about the technologies available and explained about need for Data Analyst in any organization which generates large volumes of data. Apache Spark architecture was explained. Installation of Spark with word count example on Spark-core was detailed. Participants were asked to install and practice the same. Mr. Sasikumar, Mr. Abhishek Shenoy, Mrs. Sasikala, Ms. Kavietha, Mrs. Dhivya, Mr. Pankaj and Dr. Lokeswari



Introduction and Invocation

Mr. Sasikumar Venkatesh

Software Engineer, Walmart, Bangalore

Mr. Abhishek Shenoy

Software Engineer, Walmart, Bangalore

guided participants during hands on through whatsapp groups. After a short break, Spark-SQL concepts were explained. Spark SQL allows data to be stored and processed in a structured format. Spark SQL hands on was conducted post lunch. Finally participants were asked to work out on exercise problems on Covid-19 dataset.

On second day Spark Streaming was introduced. Scala programming was introduced and word count example was explained with Spark Streaming. A Distributed Broker network with Kafka (A Publish / Subscribe System) was introduced with its architecture. Kafka was installed and Eclipse IDE was used to program and create broker network, producer and consumers. Hands on session was conducted to install Kafka and start broker, scheduler network. A demonstration was carried out to explain how to stream data using Kafka to the Spark environment using Eclipse integration with Spark. The word count example was demonstrated on the Kafka streaming with Dstream platform.

IWBDA 2020
INTERNATIONAL WORKSHOP ON BIG DATA ANALYTICS

IWBDA is a 3-day international workshop, organized by the department of CSE under the research project Nagarik Rog Pratirakshak : Unified Smart Immunization Coverage Monitoring and Analysis (UniSICMA), funded by BIRAC (Biotechnology Industry Research Assistance Council), Department of Biotechnology, Government of India under the scheme *"Grand Challenges India (GCI) – Immunization Data: Innovating for Action (IDIA)"*.

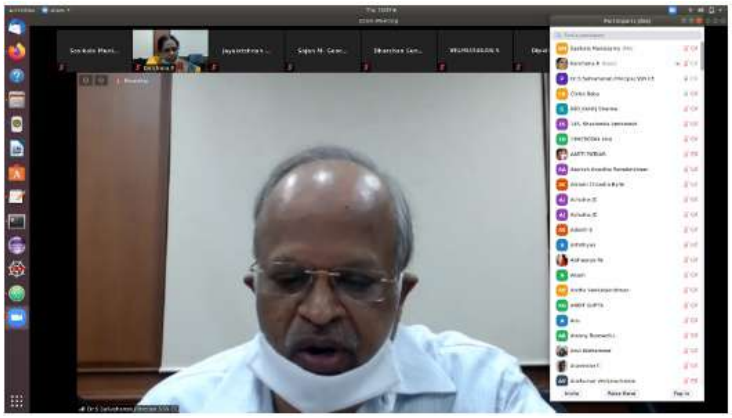
The project is a collaborative effort of Indian Institute of Information Technology, Una, Himachal Pradesh and SSN College of Engineering with Principal Investigators Prof. S. Selvakumar from IIIT-Una and Dr. R. Kanchana from SSNCE. The total budget of the project is 106 lakhs.

The workshop was conducted on virtual platform for academicians, researchers, students and industry professionals in the emerging area of Big Data Analytics. Of the overwhelming 860 registrations, the workshop was attended by 404 participants that included 134 students, 208 faculty members, 52 research scholars, and 10 industry professionals across the globe.

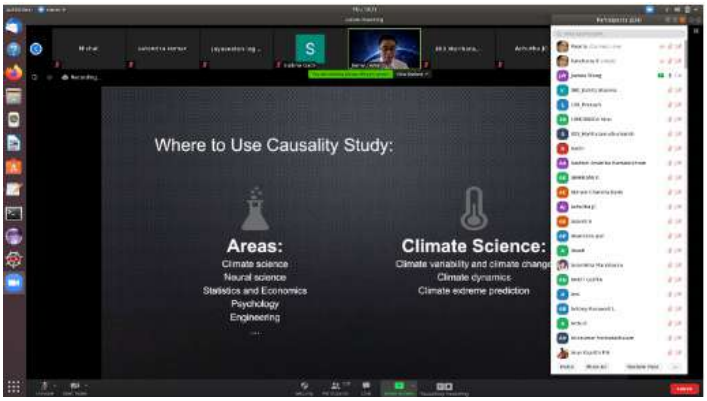
The international workshop was conducted online using Zoom APP due to the COVID -19 pandemic. Had we conducted the event with physical presence, it would have cost around 10 lakhs.

The topics dealt spanned across the Data Science, covering it with a set of topics perfectly stitched and delivered by experts from the respective fields. The speakers were experts from across India, United Kingdom and United States of America.

The Inaugural session was held on 28th May. Our HoD, Dr. Chitra Babu welcomed the participants. Our beloved Principal Dr. S. Salivahanan delivered the inaugural address. The whole workshop was anchored by Dr. R. Kanchana. The three days had the speakers leading the audience through the various facets of Big Data. On the last day of the workshop, (30th May, 2020), Dr. S. Selvakumar summarized the events of the workshop and Dr. R. Kanchana delivered the vote of thanks.



Dr. Chitra Babu, Prof. and HoD, CSE and Dr. S. Salivahanan, Principal, SSNCE on the Welcome and Inaugural Addresses



Snippets from Sessions. Featured here: Big Climate Data Analytics and Text Analytics with Deep Learning

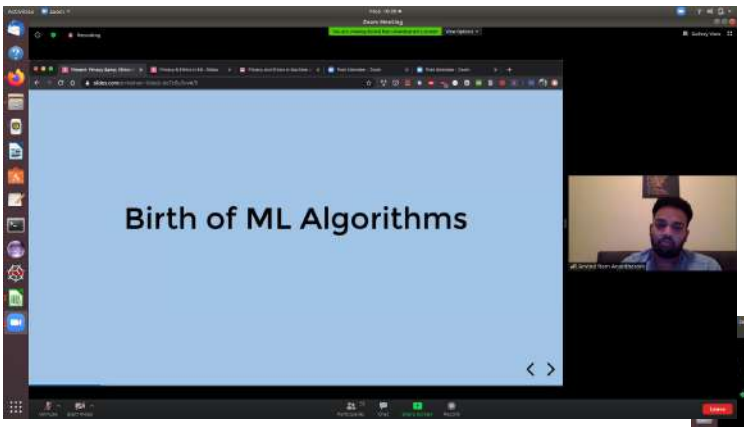
The international workshop was conducted online using Zoom APP due to the COVID -19 pandemic. The workshop received excellent feedbacks from the participants especially about the professionalism with which it was conducted. It was an intellectual celebration of Big Data.

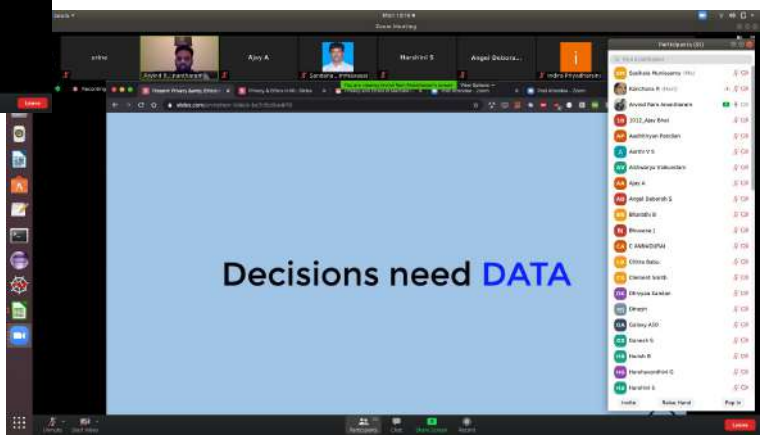
On the whole, organizing this workshop has given a sense of fulfillment and satisfaction to the coordinators.

PRIVACY AND ETHICS IN MACHINE LEARINING

Mr. Arvind Ram, explored the rarely talked niche of machine learning sector- Privacy and Ethics. Currently working as a Software Engineer at Google, San Francisco , USA, he is an alumnus of SSNCE. He delivered an hour-long session to an intent crowd of eighty staffs and scholars.

On the morning of 10th of June, scholars, experts and novices alike, came together virtually to explore Machine Learning, in a finer perspective. The webinar commenced around 10 AM. Mr. Arvind Ram, the speaker who made his way from SSN to ThoughtWorks and Stonybrook in New York to Google, spoke in what can be called a 'warm, intellectually cozy gathering'. In the session that lasted an hour , his talk touched upon and explored the topics such as short introduction to ML (using regression), why privacy is important, ethical approaches to solve the problem, some case studies of bias in Machine Learning, and how to avoid bias by while maintaining privacy.





The webinar was organized by R. Kanchana, K. Lekshmi and N. Sujaudeen. Suffice to say it was an enlightening session that added purpose into the uncertain times that have come to pass.

ONLINE WORKSHOP ON AI AND ITS APPLICATIONS

I have attended 5 days FDP Instructor Led Live Online workshop on AI and its Applications conducted by Finland Labs in association with National Social Summit, IIT Roorkee during 18 and 25th May 2020.

The whole program was conducted by the Instructor Mr. Umang Kejriwal, Finland Labs. On the first day, we had an introduction session to Data Science, ML and AI. Further, the practical session on Numpy, Pandas and Data visualization using Matplotlib library was conducted.

On the second day, tabular data was used to predict the score using linear regression technique. Following that we had session to classify the Iris data using KNN classifier. Next we had sessions for scraping the web for collecting the data from Amazon and Twitter website. On the next day, sessions were on detecting the face using faces dataset. Following that there was a session to construct neural network using python library and to perform prediction using MNIST handwritten image dataset. Further, we also had session on classification using CNN. The sessions were very useful for me from practical point of view.

Dr. Prabavathy B.

Asso. Prof./ CSE

WORKSHOP ON ML AND AI USING COVID-19 VIRUS DATA ANALYSIS

We both attended the 2 days instructor led online workshop on ML and AI using Covid-19 Virus Data Analysis conducted by Finland Labs in association with National Social Summit, IIT Roorkee during 9th and 10th May 2020.

The entire workshop was handled by Mr. Umang Kejriwal from Finland Labs. On the first day, we had an introductory session to Data Science, ML and AI. Further, there was a practical session on Numpy, Pandas and Data visualization using Matplotlib library. The third session was about using COVID-19 data to perform various analytics.

On the second day, using COVID-19 dataset, prediction of data for the next 7 days was taught. In the next session, he touched upon the neural networks concepts. Further, we had practical sessions on building neural network and digits prediction by building CNN model from MNIST handwritten dataset with the help of python library. On the whole, the sessions were very interesting and useful.

Dr. V.S. Felix Enigo and Dr. B. Prabavathy
Asso. Prof./ CSE

SPARK+AI SUMMIT 2020 VIRTUAL COMMUNITY CONFERENCE

Attended the online event Spark+AI Summit 2020 on 25-26 June 2020, the world's largest conference for the Apache Spark community around data and machine learning. Even though my area of interest does not includes data analytics, but I was interested in hearing about the current technology/framework related to data processing. I attended specifically 2 sessions related to NLP. One is "Text Extraction from Product Images Using State-of-the-Art Deep Learning Techniques" by Rajesh Shreedhar Bhat, Data Scientist at Walmart, Bangalore. The session mainly dealt with the extraction of texts of various sizes, shapes and orientations from images containing multiple objects. An end-to-end CRNN-CTC deep neural network was applied to extract the text in 2 stages. CNNs are used to extract the text features which are then passed to LSTM and the CTC act as decoder to obtain raw text from the image.

The next topic which I was very eager to attend was "Building a Pipeline for State-of-the-Art Natural Language Processing Using Hugging Face Tools" by Lysandre Debut, Machine Learning Engineer at Hugging Face and Anthony Moi, tech lead at Hugging Face. The natural language processing (NLP) landscape has radically changed with the arrival of transformer networks in 2017. From BERT to XLNet, ALBERT and ELECTRA, huge neural networks now manage to obtain unprecedented scores on benchmarks for tasks like sequence classification, question answering and named entity recognition. The pipeline from text to prediction remains complex, but tools like huggingface/transformers and hugging face/tokenizers take most of the burden off of the user, offering a simple API. This session was fully focussed on the entire NLP pipeline, from text to tokens with hugging face/tokenizers and from tokens to predictions with huggingface/transformers.

Mr. Senthil Kumar B.
AP/CSE

ICASSP 2020

I attended virtual conference IEEE international conference on acoustics, speech and signal processing 2020 during May 4-9 2020. I attended two tutorial sessions and various paper presentation sessions related to speaker verification and spoofing detection.

First tutorial session is on " Distributed and efficient deep learning" handled by Wojciech Samek and Felix Sattler Fraunhofer Heinrich Hertz Institute. This tutorial session dealt with how to handle deep learning models for embedded devices which has limited memory & storage capacities and restricted energy resources.This tutorial also described the techniques to handle the training data in distributed applications.

Second tutorial session is on "Adversarial Robustness of Deep Learning Models: Attack, Defense and Verification" handled by Pin-Yu Chen, IBM Research, Yorktown Heights. This tutorial provides an overview of recent advances in the research of adversarial robustness, featuring both comprehensive research topics and technical depth. This tutorial covered three fundamental pillars in adversarial robustness: attack, defense and verification. Attack refers to efficient generation of adversarial examples for robustness assessment under different attack assumptions (e.g., white-box or black-box attacks). Defense refers to adversary detection and robust training algorithms to enhance model robustness. Verification refers to attack-agnostic metrics and certification algorithms for proper evaluation of adversarial robustness and standardization. For each pillar, they emphasized the tight connection between signal processing and the research in adversarial robustness, ranging from fundamental techniques such as first-order and zero-order optimization, minimax optimization, geometric analysis, model compression, data filtering and quantization, subspace analysis, active sampling, frequency component analysis to specific applications such as computer vision, automatic speech recognition, natural language processing and data regression.

Dr. B. Bharathi
Asso. Prof. / CSE

MONGODB.LIVE VIRTUAL CONFERENCE

MongoDB.live, was a global, digital-first, two-day event on June 9-10, connecting attendees to MongoDB.live content and each other through streamed keynotes, breakout sessions, interactive learning, and digital "ask the expert" sessions with MongoDB technical experts. The keynote session was delivered by Sahir Azam Chief Product Officer, MongoDB and Dev Ittycheria, CEO & President, MongoDB.

In the event, MongoDB team released some of the products such as Schema Advisor. Schema Advisor is a new tool released in MongoDB Live. It helps solve the problem users have with knowing what the right data model should be for their application. The Schema Advisor automatically recommends you how to improve your schema to run MongoDB more performantly. This Schema Advisor is included in MongoDB Atlas!

The most interesting session that I attended as a Database Design enthusiast was "Data Modeling with MongoDB". MongoDB provides an extremely flexible document model for your use. At the same time the data model you design can seriously speed up or slow down your application. For example, an RDBMS approach to an IoT data storage will significantly slow down the application when used with a document model. This means that with great data modeling flexibility comes with even greater responsibility. What are the best practices for data modeling that leverage MongoDB's flexible Document Model to best support your application through its development? This session fully discussed about the most important considerations when making decisions about the data model.

I participated in "Ask the Experts Panel - Schema Design" with Sam Harley, Vigyan Jain, Brett Gray of MongoDB. This session covered the guidelines on how to structure your data, best practices on schema design. A frequently asked question in the MongoDB community is "How do I structure my data?" MongoDB's dynamic schema makes it easy for you to optimize your schema based on your application's design patterns. But with this great power, comes a lot of responsibility. Many of the performance problems in MongoDB applications lead back to a misunderstanding of schema design. This session focussed on resolving the Schema design with different patterns. We were given a set of requirements and asked to find out possible schema designs. The speaker explained the issues in each and every schema design and made us understand that the best possible design depends only on the requirement and application.

Also, there were sessions on Compass, Charts, Atlas. MongoDB Atlas Data Lake - which allows you to natively query and analyze data across AWS S3 and MongoDB Atlas. Compass - the GUI for MongoDB, MongoDB Compass allows you to make smarter decisions about document structure, querying, indexing, document validation, and more..

Mr. Senthil Kumar B.
AP/CSE

FDP ON R PROGRAMMING

The Two day online FDP on R programming was conducted by School of Computer Science and Engineering (SCOPE), VIT, Chennai, during 14, 15 May 2020.

In the first session, Dr.Bhargavi gave introduction to the R Programming, Working in Rstudio environment and accessing spoken tutorial. The topics covered in the FDP were from Spoken Tutorial. Spoken Tutorial is an initiative of IIT, Bombay with a National Mission on Education through ICT, powered by MHRD, Govt. of India, to promote IT literacy through Free & Open Source Software for Education. Various topics in R like introduction, installation, basics, dataframes, matrices, data manipulation and plotting are covered in Spoken Tutorial video lectures. The programs were developed in RStudio Cloud environment. Apart from this, an assignment and quiz were given to the participants on both days. These assignments, quiz given were very useful in understanding the R Programming concepts clearly. As the last session, Dr.Bhargavi explained the working of R in a data mining application. This FDP has helped us to understand the R-programming concepts clearly and how it can be used to analyze the data.

Ms. S. Rajalakshmi, Ms. A. Beulah, Ms. S. Angel Deborah
AP/CSE

WEB BASED FDP ON SOFT COMPUTING

I attended a webinar titled "Web Based FDP on Soft Computing" organized by School of Information Technology and Engineering (SITE), VIT Vellore during June 22nd - June 26th, 2020.

The first day of the webinar started with a talk on "Introduction to Deep Learning, Predictive Analysis using Artificial Neural Networks" by Mr. Jai Ganesh, Senior Head Engineer, HCL. He gave introduction to deep learning, discussed about several deep nets and also emphasized the importance of hyperparameter tuning. During his talk he discussed several real time examples and explained about the demand classification and predictive analysis that were used in Uber and Ola.

The second day of the webinar was handled by Mr. Deepan Raj who works at Visteon Technical Pvt. Ltd. He delivered lecture on "Recurrent Neural Networks using Natural Language Processing" where he explained about the working of RNN and its applications. During the hands-on session he showed how the sequence network predicts the next word, helps in image captioning and Music composition.

On the third day, Mr. Jai Ganesh talked on the title "Introduction to Image Classification Technique, Convolution Neural Network and Case Study". He explained about the CNN architecture and discussed about the parameter tuning that helps to achieve high performance for different image categories using case studies.

The fourth day of the webinar started with a talk titled "ML/DL with IOT - Realtime Use Cases" by Mr. Bharathiraja N, Senior architect, Linumiz. He discussed about the different senors, their usage and realtime projects he had handled. In the afternoon session Mr. Magesh Babu, senior project manager at Ericsson gave an insight about metric based learning and also explained how weakly labelled images are handled by deep nets using metric learning.

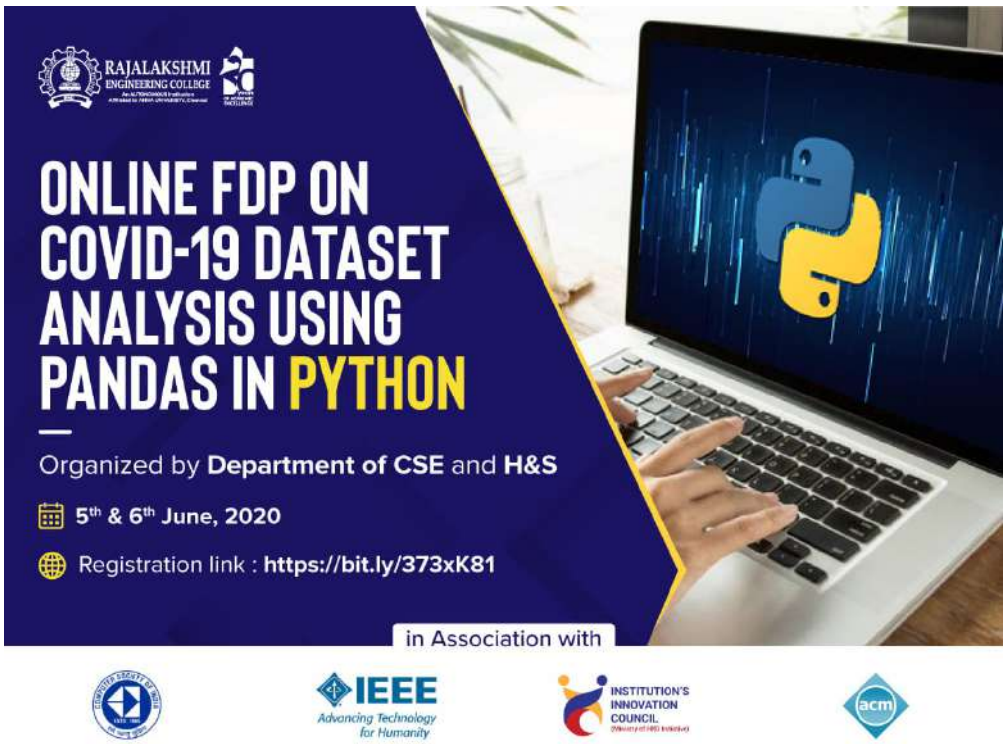
Final day of the webinar introduced applications of AI/ML in Computer Networks and 5G network data analytics services". It was handled by Dr. K. Kanagasundram who works at Lumina Networks. He explained 5G networks and discussed the differences between 4G and 5G. He concluded the session by explaining the applications of AI and ML in networks.

P. Mirunalini, Asso. Prof / CSE

TWO DAYS ONLINE FDP ON COVID-19 DATASET ANALYSIS USING PANDAS IN PYTHON

Dr. K.Vallidevi, Ms. S. Rajalakshmi and Ms. S. Angel Deborah attended a two day Online FDP on "Covid-19 Dataset Analysis using Pandas in Python" conducted by Rajalakshmi Engineering College, Chennai during 5th and 6th June 2020. Using the Google classroom facility the sessions and quiz were handled. The basics of python, pandas and matplotlib were covered in first day with demo. Quiz and exercise problems were scheduled in the evening. Analyzing the Covid-19 dataset with various formats and plots were discussed and demonstrated on the second day.

The sessions were handled by Dr. B. Swaminathan, Professor, Department of CSE, Rajalakshmi Engineering College and Mr. M. Anand Raj, Assistant Professor, Department of S&H, Rajalakshmi Engineering College. The speakers clearly explained the concepts in a step by step manner. The FDP met our expectations in understanding the concepts and we gained the working experience in data analysis using python. This FDP has helped us to better understand the usage of pandas and matplotlib in analyzing and representing data in research.



WEBINAR TALK SERIES: PLACEMENT AND TRAINING

Under the students' branches of IEI, IEEE, ACM and MaxFlow, a webinar talk series on placement and training has been organised in Computer Science and Engineering department of SSN College of Engineering, Chennai. It was a series of 3 webinars, all exploring the real-world aspects of finding and performing in a job.

Webinar 1

The session was on the topic "Job scouting and on-demand skill development". It took place on 2nd, July, 2020. This session was handled by Harshavardhan P (placed in CITI Bank) and Logesh D (placed in Sirius Computer Solutions). In this talk, the speakers explained about the requirement of companies and how the gaps between academics and requirements can be managed. Different technologies, tools and other skills need to be developed were discussed during the talk. Some of their projects also were demonstrated to give an overall feel of market requirements.

Harshavardhan P

Logesh D

Webinar 2

The session focussed on "Career portfolio designing and acing on-campus recruitment" It took place on 6th, July, 2020. The speakers were Kalaivani K. (Placed in Google LLC) and Tarun Ganesh (Placed in Goldman Sachs Inc). This talk was about the resume preparation and how to make the projects and documents available in public platform to attract the companies. It was an interactive session and was helpful to organize their achievements in attractive way.

Tarun Ganesh

Kalaivani K

Webinar 3

The session explored the topic "Cracking coding and design interviews " (It took place on 10th, July, 2020. The session was handled by Anish Badri R. S. (Placed in Google LLC) and Vishal Ananthakrishnan (Placed in Google LLC). It was all about the cracking of coding and system design rounds of interviews. They also discussed about coding competitions and the merit of grades in these competitions in placement process. Various parameters that optimize the performance of a code also were the part of the discussion.

Anish Badri R. S

Vishal Ananthakrishnan

Mr.K.R.Sarath Chnadran
AP/CSE

LOW CODE PLATFORMS FOR THE ENTERPRISE

Under the students' branches of IEI, IEEE, ACM and MaxFlow, an Alumnus webinar talk series has been organised in Computer Science and Engineering department of SSN College of Engineering, Chennai. The aim of the talk series was to provide the complete insight into company expectations in the future III Year students. The talks were handled by our Alumnus. The co-ordinators were Mr. K. R. Sarath Chandran (IEI CSE Department Students' chapter Co-ordinator), Dr. D.Venkata Vara Prasad, Dr. V.Balasubramanian and Mr. N. Sujaudeen.

The talk on 9th June 2020 was delivered by our department alumnus, Mr. Hari Ganesh, Global Alliance Head, Mendix, USA of 2006-2010 batch.

In this talk, the speaker explained about the need for Low Code Platforms for the Enterprise. The speaker explained the need for students to learn so that they can have edge over others. Some of their projects also were demonstrated to give an overall feel of market requirements.

Dr. Balasubramanian V.
AP/CSE

EXPLORING THE NUANCES OF DEEP LEARNING FOR RESEARCH APPLICATIONS - A DEEPER EXPERIENCE

The online FDP on " Exploring the nuances of Deep Learning for Research Applications - A Deeper Experience", hosted by Karunya Institute of Tech and Sciences during 13.07.2020 to 17.07.2020 has explored the various applications of using deep learning techniques particularly in health applications.

The program was well organised. Deep Learning of medical imaging, object detection, cancer diagnosis, health care and smart environments was handled by faculties from prestigious institutions. Dr.Anand Nayyar, Day tan univ, Vietnam, Dr. Cristopher Clemero, VIT, Vellore, Dr.Varun P.Gopi, NITK, Dr.Utku kose, Saleymeno kemirei. The talks were on a wide variety of research applications using deep learning.

Machine learning based AI systems in healthcare and smart environments lecture was given by Dr. Anastasia Angeloupoulou, University of Westminster, UK. She discussed about basics, some concepts such as cost function, activation function, gradient descent function, back propagation, some success stories of deep neural networks such as Dunhill medical trust funded project: Automatic diagnostic toolkit for Dementia in aging deaf users of British sign language (BSL), GCRF funded project: Intelligent Transportation infrastructure (ITI) for urban environments and modern cities". She had also answered to many of our research questions. It was an interesting session.

Youtube link for your reference:
https://www.youtube.com/results?search_query=fdp+karunya

Overview of Artificial Intelligence and Its Application to Medical Imaging was handled by Dr. Anand Nayyar, Professor, Researcher and Scientist, Graduate School, Duy Tan University, Da Nang, Viet Nam. He discussed about. He discussed about the basics of AI, Machine learning and different AI tools used in medical domain. He also discussed about Common Challenges in Medical Data Analysis using Deep Learning.

Youtube link for reference: https://www.youtube.com/watch?v=5cfQshyrVv4

Dr. Christopher clement, VIT-Vellore, handled the topic on "Deep learning techniques for object detection applications". He explained about how deep CNN used for object detection application. He discussed about the hyper parameter learning in detail. He also demonstrated the object detection using python jupyter notebook.

Youtube link for object detection :
https://www.youtube.com/watch?v=vJVQMc9wNks

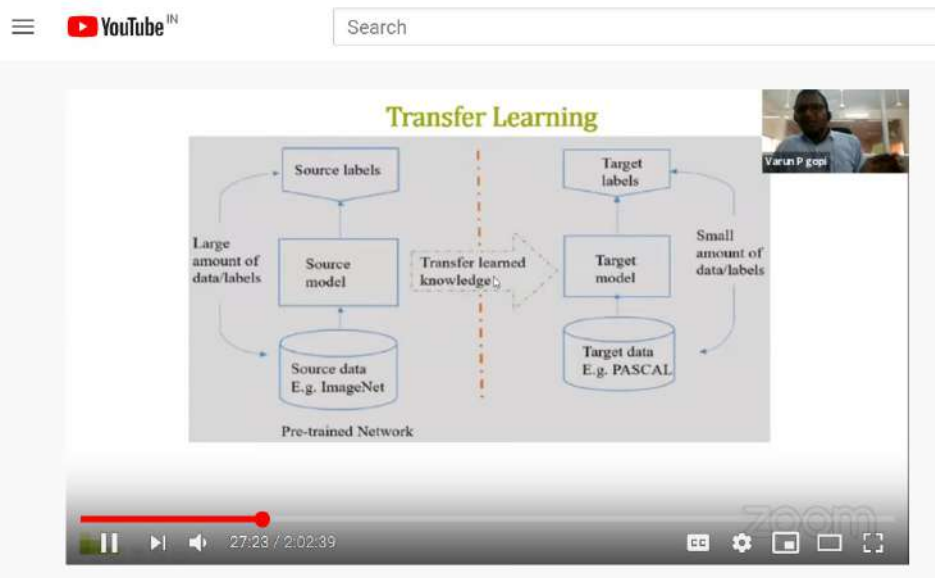
Dr. Varun Gopi, Assistant professor, NIT, Tiruchirappalli handled session on "Introduction to deep learning and its medical domain applications". He discussed the basics as well as transfer learning and availability of various data sets.

Youtube link for this session:
https://www.youtube.com/watch?v=uxBNfEL7CK8&t=854s

Deep learning for cancer diagnosis was handled by Dr. Utku kose, Suleyman Demirel University, Turkey. He explained the basic concepts as well as each step of cancer diagnosis process in detail.

Youtube link for this session:
https://www.youtube.com/watch?v=m6AKlFisP0g&t=5706s

- Dr. B. Bharathi,
Associate Professor,
Dept of CSE



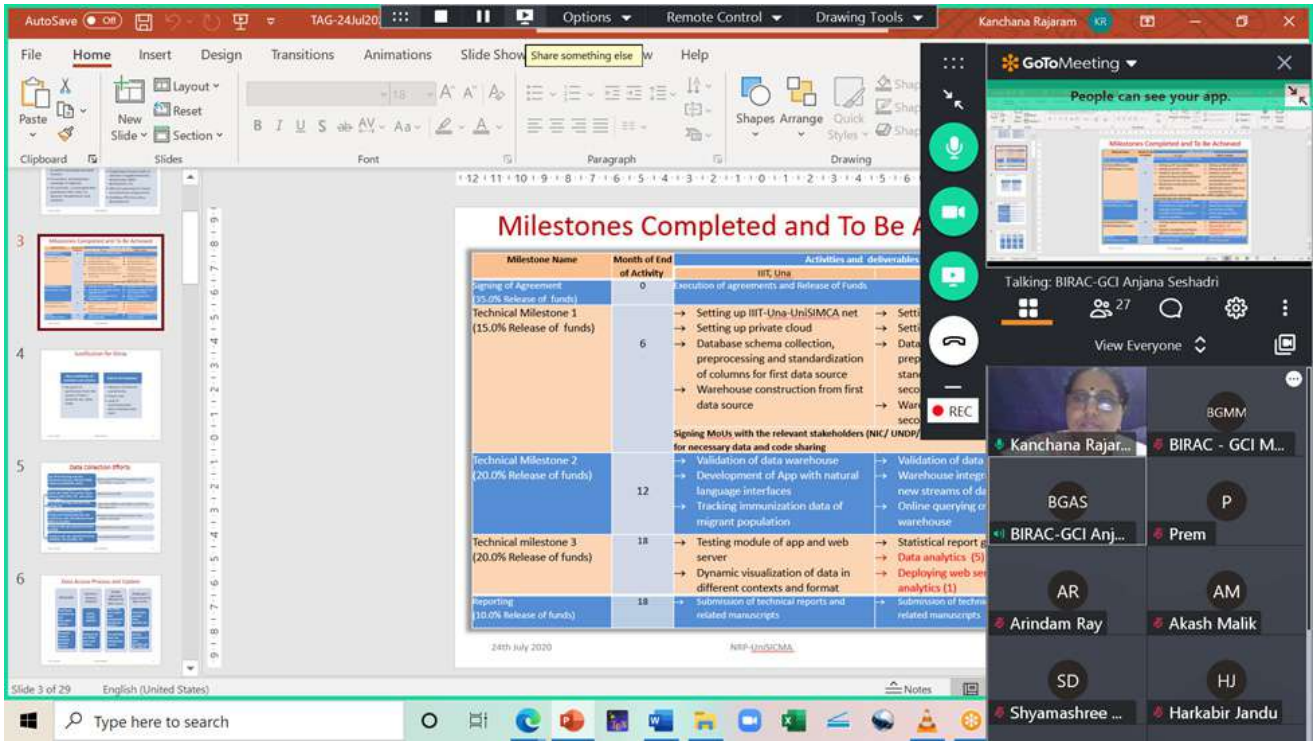
TECHNICAL ADVISORY GROUP MEETING RESEARCH PROJECT FUNDED BY BIRAC, GOI

The PIs of the project presented and demonstrated their research project to the Technical Advisory Group (TAG) and Project Monitoring Committee (PMC) formed by BIRAC, New Delhi, to review the progress of the project. The members of the group appreciated the work and offered more suggestions.

Appreciation mail from PMC member Harkabir Singh Jandu, Clinton Health Access Initiative, Inc.

Fantastically done! Not only is your work highly impressive but also has immense potential for much needed change. Great effort and attitude in face of a multitude of challenges. Honoured to be associated with this project.

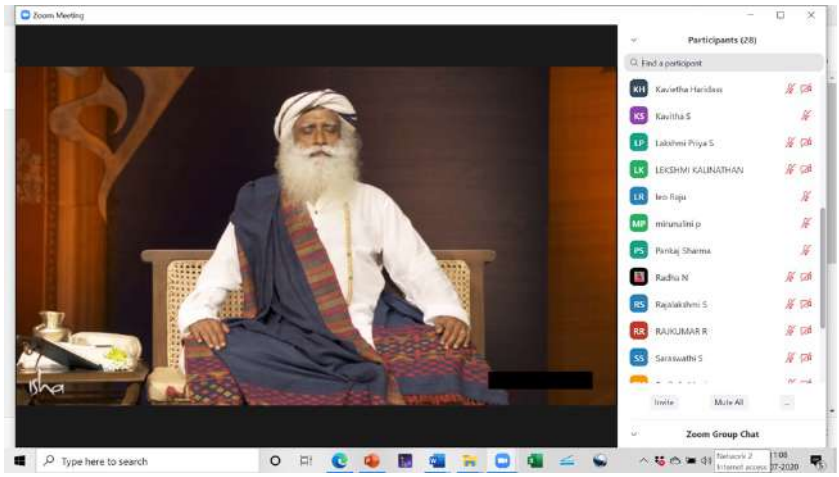
PI in IIIT Una, HP : Prof. S. Selvakumar
PI in SSNCE, TN : Dr. R. Kanchana

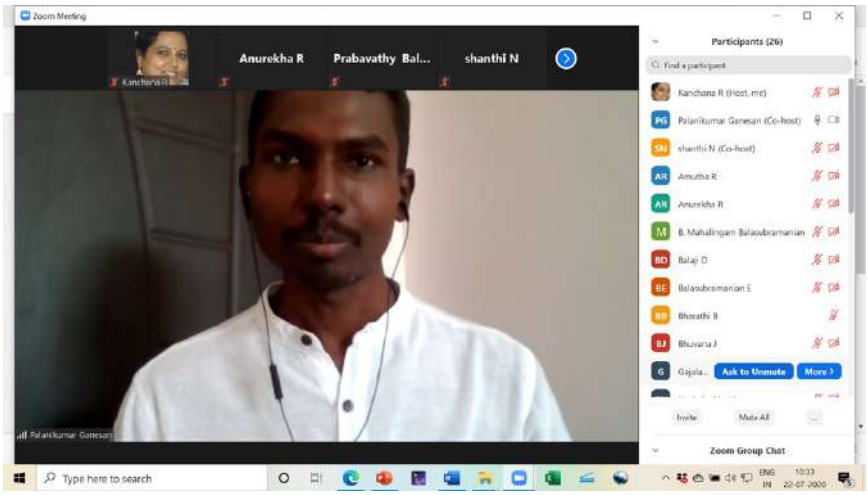


SESSION ON YOGA FOR HEALTH

This session offered simple, yet powerful tools designed by Sadhguru, Isha Foundation, Coimbatore to manifest health and vitality in body and life. The session also included a yogic process called “Simha Kriya” specifically designed to support the respiratory system and a meditation namely “Sith Shakthi for Health”.

The target audience are Faculty members, Non-teaching staff, Research scholars. The session received a good response with 45 participants. They were also provided tips for improving immunity and health. The event was organized by Dr. R. Kanchana

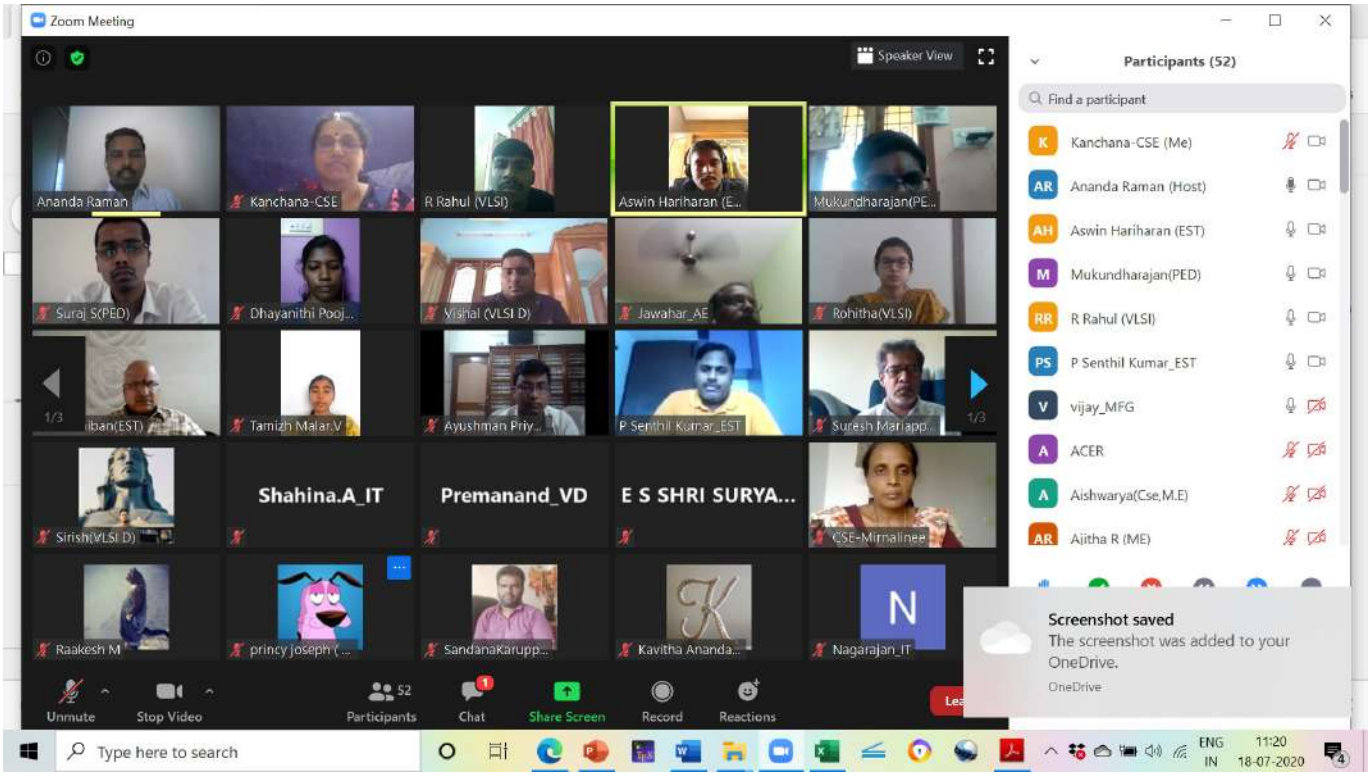




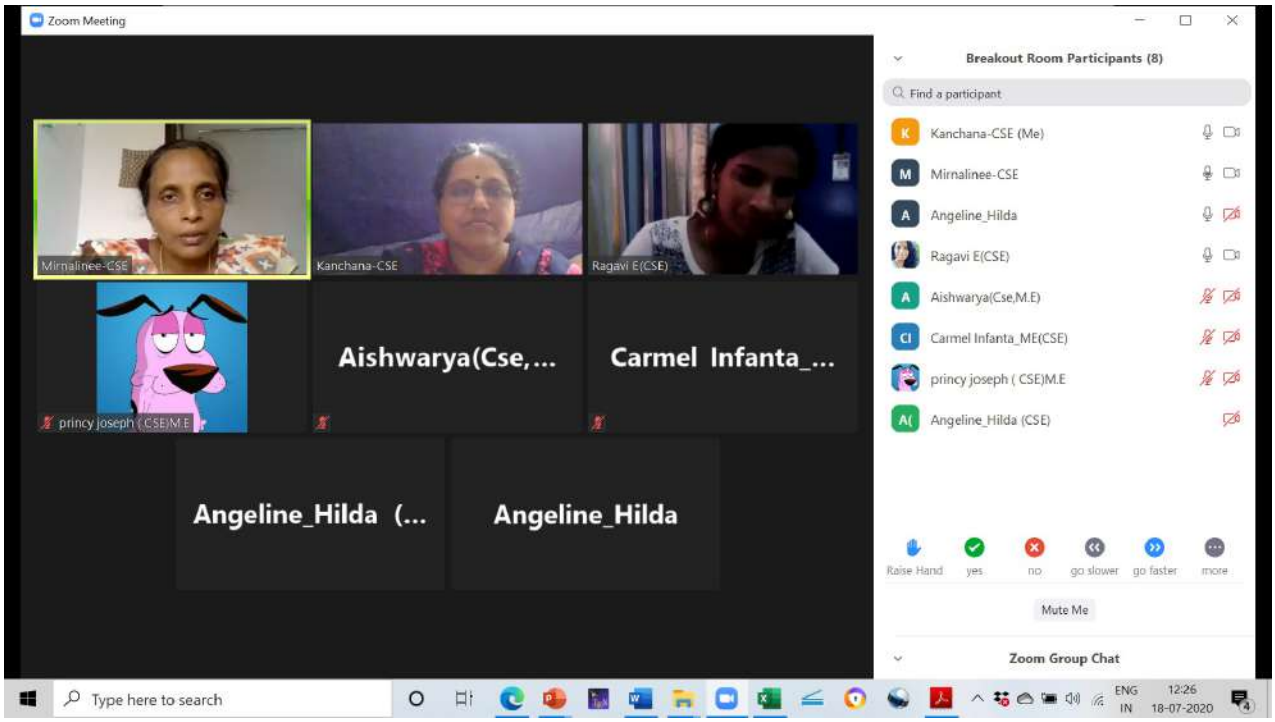
VIRTUAL OPEN DAY FOR THE APPLICANTS OF ME(CSE) STUDENTS

A meeting was organized by Mr. Ananda V Raman N, Assistant Director – Marketing, SSN Institutions to interact with the applicants for PG courses. There was a presentation and virtual tour of SSNCE. Later the department representatives Dr. T.T. Mirnalinee and Dr. R. Kanchana greeted the applicants of ME(CSE) programme and presented an overview of the department, faculty, research, achievements, etc. There were several queries from the applicants, and all of them were clarified.

- Dr.R.Kanchana,
Associate Professor,
Dept of CSE




You are screen sharing
Stop Share
MOUS AND CONSULTANCY PROJECTS
MOUs
Caterpillar
ACI Systems
Manatec
Vimana Technologies
Intellect Design
Industry Projects
Dynamic Reporting Framework
Video Analytics
Smart Manufacturing
Flight Path Tracking & Data Transfer
3D reconstruction for Photogrammetry
Data Visualization
Augmented Reality
Kernel Optimization
Kanchana-CSE
Mirnalinee-CSE
Aishwarya(Cse,...
Ragavi E(CSE)
20
ssn


Zoom Meeting
Mirnalinee-CSE
Kanchana-CSE
Ragavi E(CSE)
princy joseph (CSE)M.E
Aishwarya(Cse,...
Carmel Infanta_...
Angeline_Hilda (...
Angeline_Hilda
Breakout Room Participants (8)
Find a participant
Kanchana-CSE (Me)
Mirnalinee-CSE
Angeline_Hilda
Ragavi E(CSE)
Aishwarya(Cse,M.E)
Carmel Infanta_ME(CSE)
princy joseph (CSE)M.E
Angeline_Hilda (CSE)
Raise Hand
yes
no
go slower
go faster
more
Mute Me
Zoom Group Chat
Type here to search
ENG
IN
12:26
18-07-2020

INSIGHTS INTO DEEP LEARNING TECHNIQUES

The workshop on "Insights into Deep Learning Techniques" was conducted on the 28th of July 2020. It was a well-rounded experience for the participants. It was co-ordinated by Ms S. Rajalakshmi, Ms. A. Beulah and Ms. S. Angel Deborah.

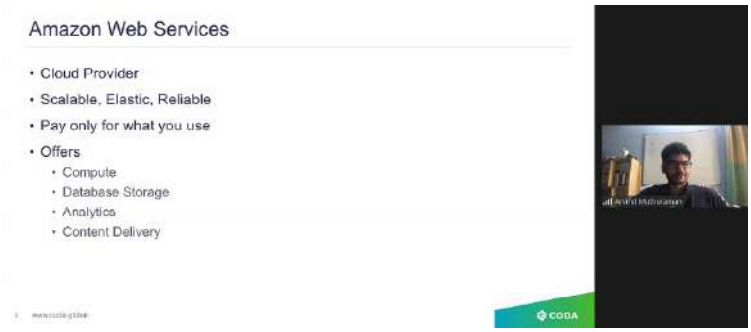
The workshop on "Insights into Deep Learning Techniques" was inspiring was one prime reason to see how students of our college have reached various heights and how they have not forgotten their roots and are giving back to the society. The workshop had over 110 participants in each session, comprising of both teachers and students from different parts of the country. The workshop was started off by an introduction of the speakers and the topics to be covered.

The first session was started by Dr. Sowmya S Sundaram, who is a Research Intern at L3S Research Centre, Germany. Her topic was Seq2seq Architecture- A case study of Deep Learning. Before diving into the topic, she gave a brief description on Artificial Intelligence, Machine Learning and Deep Learning. After that, she explained various neural architecture for sequence capturing like RNN and LSTM and went on to explain the Encoder and Decoder architecture. She also used various screenshots from the movie "Robot" or "Enthiran" to explain few of her analogies. She then gave a brief demo and explained how an encoder-decoder model works. At last, she explained the Ethics in AI, Sematic Understanding and Math Grounding which was very intriguing and well explained.

Session by Dr. Sowmya Sundaram

Session by Dr. Dineshraj Gunasekaran

The second session was by Mr. Dineshraj Gunasekaran, who is currently pursuing MS in Computing (Data Analytics) at Dublin City University, Ireland. His topic was Deep Fashion using Generative Adversarial Network (GAN). He started off by explaining the type of dataset he was using (fashion MNIST). He then normalized the data by adding an additional channel dimension to transform them to a 3-dimensional form as expected by the convolutional layers. He then went over how a Discriminator evaluates the Generator and differentiates between the real and fake samples. He explained the entire code step by step and also the different types of normalization techniques and the various activation functions. He then gave a description on how powerful GANS are and where they are used, he mentioned how Style GAN is used in the very popular mobile application called Face app and how it is used in it to add various features. Overall, the session was very interactive and interesting.



Session by Mr. Arvind Muthuraman

The final session was by Mr. Arvind Muthuraman, who is a Lead Engineer at CODA Global, Chennai. The topic on which he spoke on was ML using SageMaker. He started off by giving a brief description on AWS and listed out its advantages and practical applications. He then went on to describe the various steps involved in a machine learning model. He also explained how an Amazon SageMaker helps you to build a model using its built-in high-performance algorithms and showed us how hyperparameter tuning can be easily performed while in training. He then gave a demo on how to train a model using AWS SageMaker and how to create an endpoint for your model. He also described how you can use a notebook along with SageMaker to generate model details like precision, accuracy etc. His session was very engaging and insightful.

The workshop was highly productive and interactive despite its limitation (virtual limitations). It was well organized and has benefited many students and graduates from all over the country.

- Kshitij Sharma

III rd Year CSE

PARTICIPATION IN ONLINE TASKS–AN EXPERIENCE AND VIEW

AIcrowd forum is conducting many challenging tasks parallelly in AI and machine learning domains using different types of inputs like text, image, speech signals, sounds generated from birds and musical instruments etc. This forum has many interesting problems among which I enthusiastically participated in two tasks namely AIcowd Blitz and ImageCLEF VQA-MED 2020 during the month of May and June under the guidance of Dr.S.Kavitha.

In the first task (AICrowd Blitz), I solved five machine learning problems related to food, medical and gaming in fifteen days. Among 3663 registrations, 120 teams participated and we achieved 26th position. From this participation, I got an idea of how to approach varied problems in the AI domain inorder to arrive at an effective solution.

The second task (ImageCLEF VQA-MED 2020) is based on answering natural language questions from the visual content associated with radiology images, which is a part of my Ph.D. research work. Totally 30 teams were registered, only 11 teams were declared with valid runs after the evaluation and we secured ninth rank. Also, ImageCLEF has given an opportunity to submit working notes about the techniques applied in solving a task in CLEF2020 conference.

My sincere gratitude to the department of CSE for providing the necessary server facility to participate in these tasks, enriching my knowledge and programming skills.

-Sheerin Sitara N
Research Scholar
(CSE)

WINNING MOMENTS

International Laurels

1. Rohit Midha and Shraddhaa Mohan of third year participated in Food Recognition Challenge Round-2 organized by Seerave Foundation and hosted by AICrowd. They received a $2500 travel grant to ***AMLD 2021 in Lausanne, Switzerland*** and prize money of Rs 40,000 for being placed **first**.

2. Rohit Midha and Shraddhaa Mohan of third year under the guidance Dr. S. Kavitha, Associate Professor participated in iMaterialist (Fashion) 2020 at FGVC7 organized by Fine-Grained Visual Categorization 7 and were placed **fourth.**

3. N. Sheerin Sitara, Research Scholar and Dr. S. Kavitha, Associate Professor participated in ***ImageCLEF VQA-Med 2020*** organised by ImageCLEF 2020 as a part of CLEF initiative labs (AIcrowd) and were placed **ninth**.

State-level Laurels

1. Madhumitha S of second year participated in an ***All India level Essay Contest for National Development Agenda*** organised by Hillgrove Research Ltd. on 30th April 2020 and won the ***First Place*** at state level.

2. Madhumitha S of second year CSE along ***R.Sudiksha of second year,*** **Dr. D. Umarani** and ***Dr. R. Seyezhai, EEE*** participated in "E-Conference on Advancements of Science and Technology"(E-CAST2020) hosted by PSNA College of Engineering, Dindigul on 22nd June, 2020.

They presented a paper titled "Reliability Assessment of Single phase Quasi Inverter for PV applications" under the Mathematics domain. Being conducted in an online platform the conference saw over more than 80 registrations including research scholars, postgraduates and students from reputed institutions across India. The team was awarded the ***"Best Paper Award".***

FORD HACKATHON

As a team of three, Survesh S and Swamenathan R of third year Mechanical Engineering and myself from the CSE Department participated in Ford hackathon.

The objective of the hackathon was to build behavior models to control virtual environments based on the concept of Virtual Commissioning to improve manufacturing cycle performance.

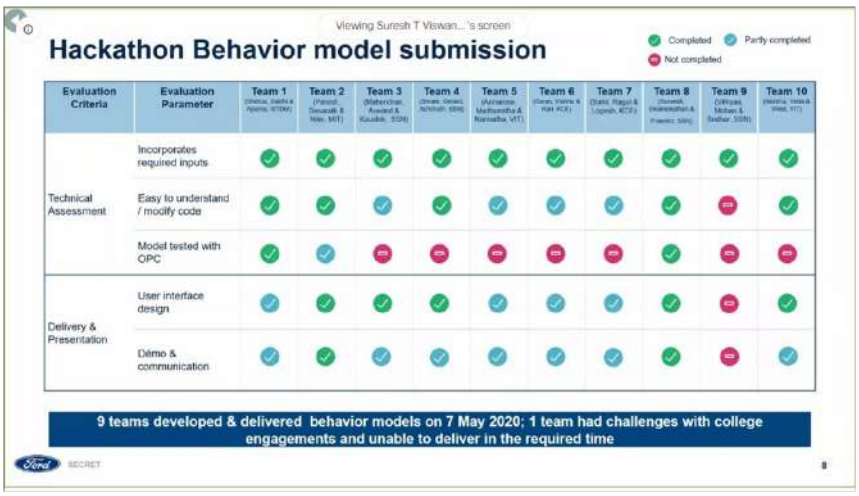
There was an initial entry test/ questionnaire which we had to answer. Virtual Commissioning being a relatively new field, we were asked to do a literature survey, Nearly 120 teams across India submitted solutions, of which 10 teams were shortlisted on 23rd February, 2020. The teams were invited for an orientation session at Ford GME campus Global Manufacturing Engineering (GME), Ford Motor Private Limited, Sholinganallur on 27th Feb.

With the advent of Industry-4.0, manufacturing industries have employed advanced risk management measures to ensure low-cost failures. Thus, before even starting the construction of a factory, the proposed model for the factory is simulated in a virtual environment thereby reducing the cost of the experiment failures. We were delegated to develop the core components of the proposed simulation of a factory (with risk management measures). These virtual components are called behavioral models. We used python to implement the project. The input PLC signals from the OPC server were processed and appropriate control signals were generated.

We were challenged to develop the behavior models for E-STOP, NUT RUNNER and VISION SYSTEM.

The finale was scheduled in the second week of March which was postponed unfortunately due to the pandemic outbreak. Later, FORD made the Finale Online and the teams were asked to submit the working behavioral model over video conference on May 7, 2020

The finale was scheduled to be conducted online on the 22nd of May. The evaluation criteria were namely 'Technical Assessment' and 'Delivery and Presentation'. For a total of 12, we secured a total of 11 points in the first category. The 'Delivery & Presentation' segment consisted of evaluating the user interface design and impact. We managed to secure 7 out of 8 points.



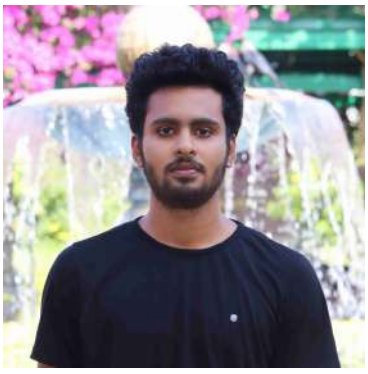
Thus with a grand total of 18 points out of 20, we were the only team to pass all the test cases and meet every functional requirement.The Manipal Institute of Technology team came second with 17 points and IIITDM team came third with 14 points.

-Praveen Kumar R of third year CSE

STEGCLOAK SOFTWARE

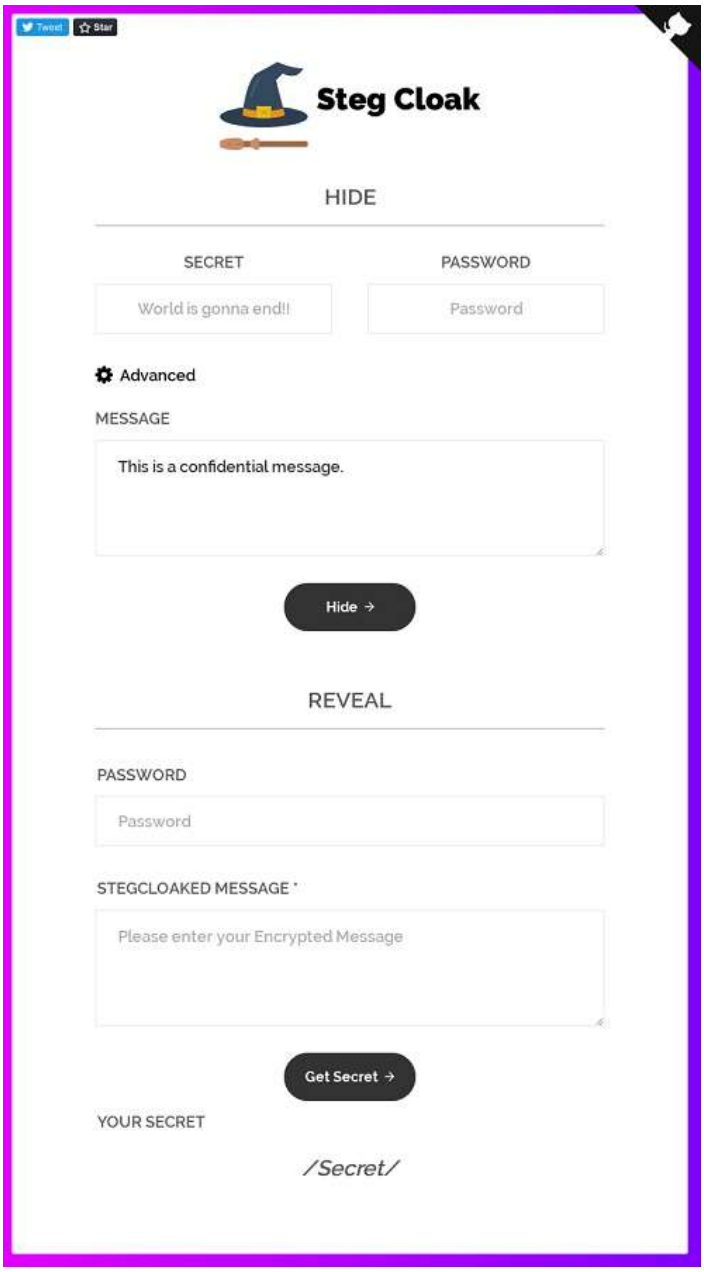
We, a team of 3 students created 'Stegcloak' –A tool that hides secrets in any written string exploiting unicode's character set. For example, 'hi bob' can hide something that is invisible to the naked eye but copy-pasted on Stegcloak, will yield the secret 'attack at dawn'. The tool is created in JavaScript, to hide the text, it goes through two layers of maximum possible compression and a layer of encryption. So not only does it hide the secret, but it also protects it with a password of your choice. The style of the codebase is based on functional programming principles like composition,pure functions,closures etc which made us standout to the open source community.

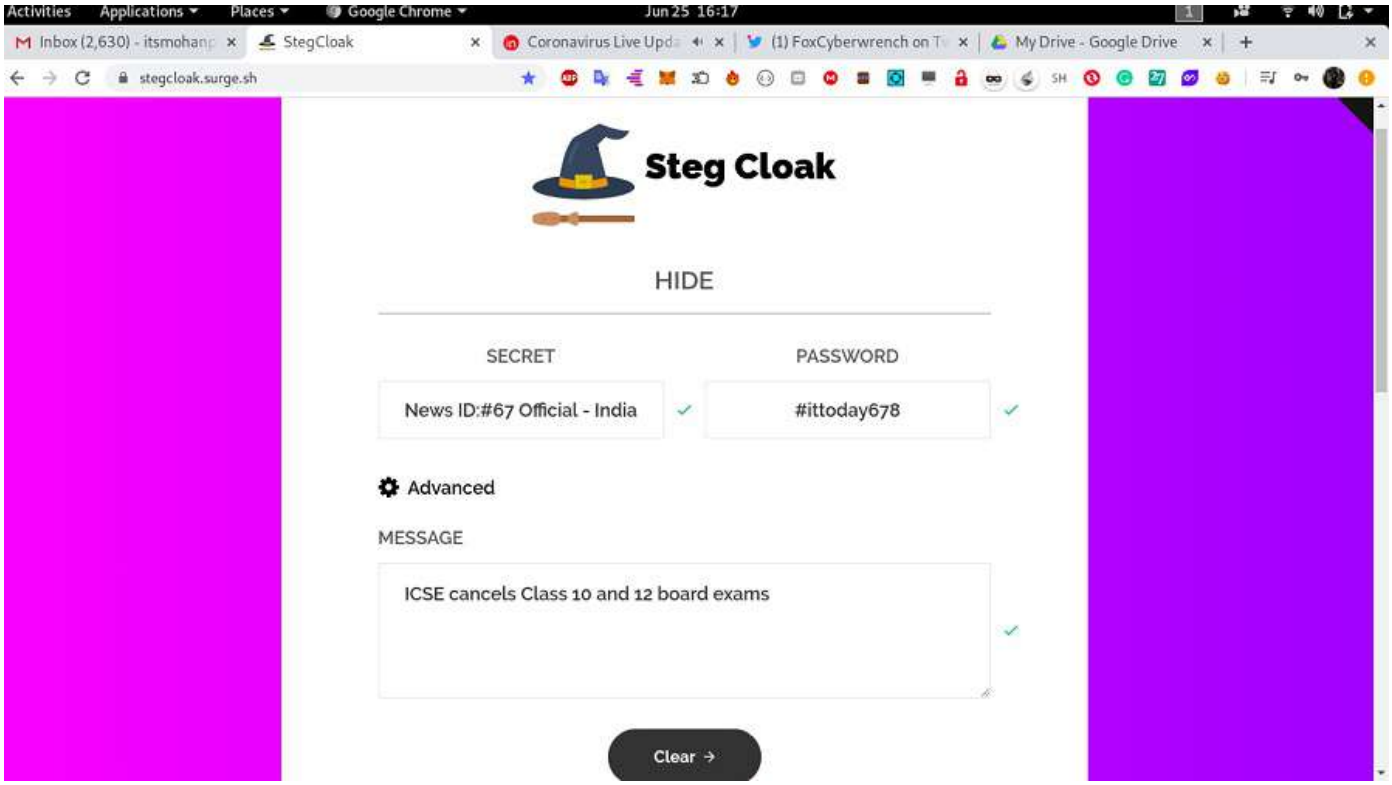
Mohanasundar M



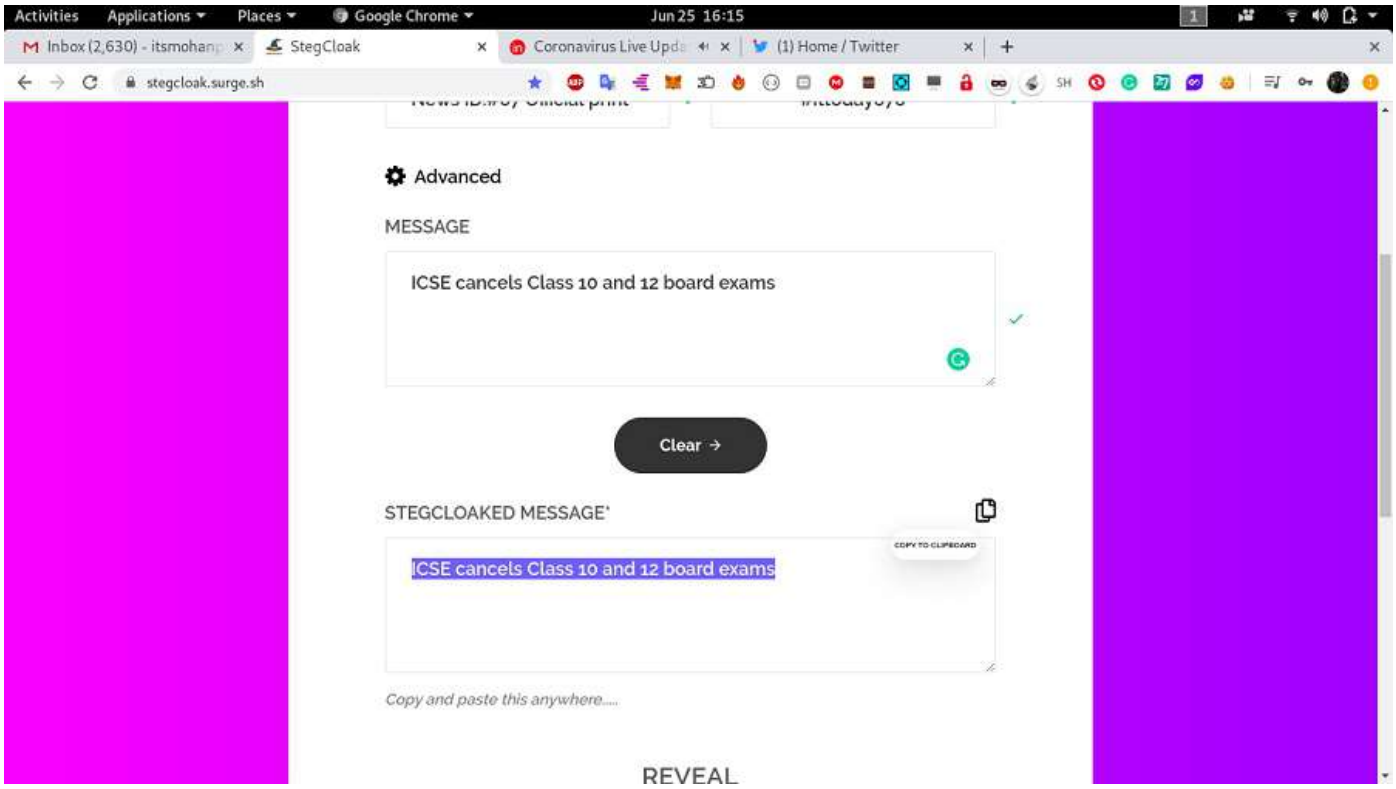
Kandavel A

Jyothishmathi CV

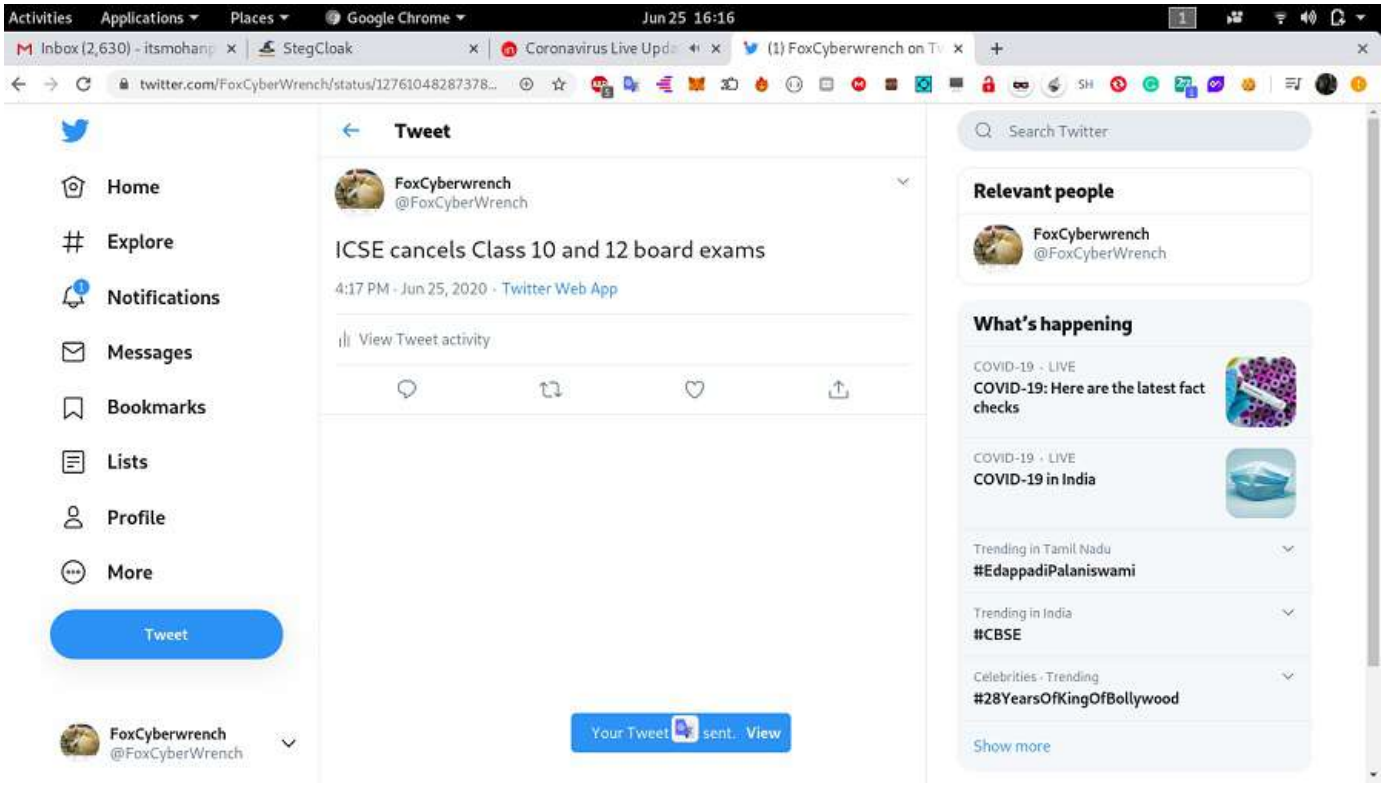




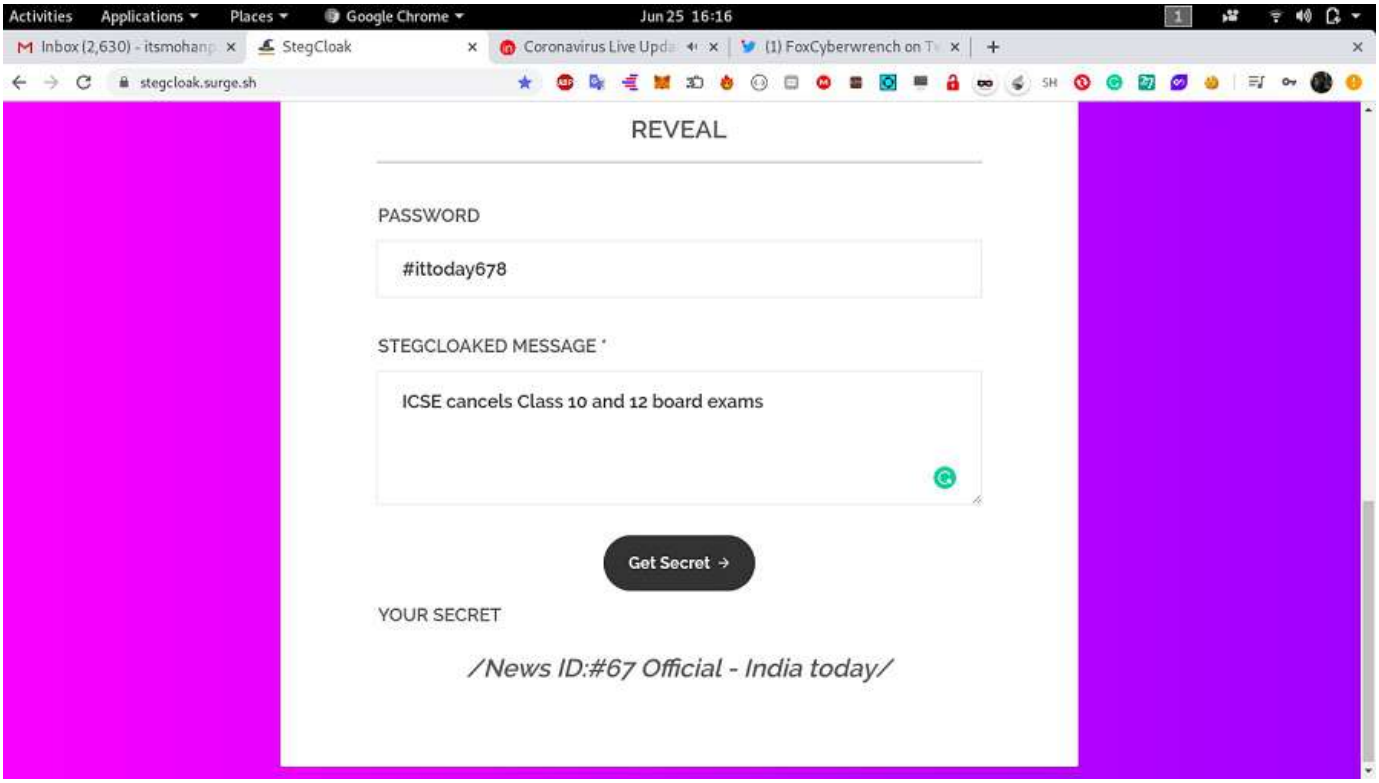
Step 1: Fingerprint



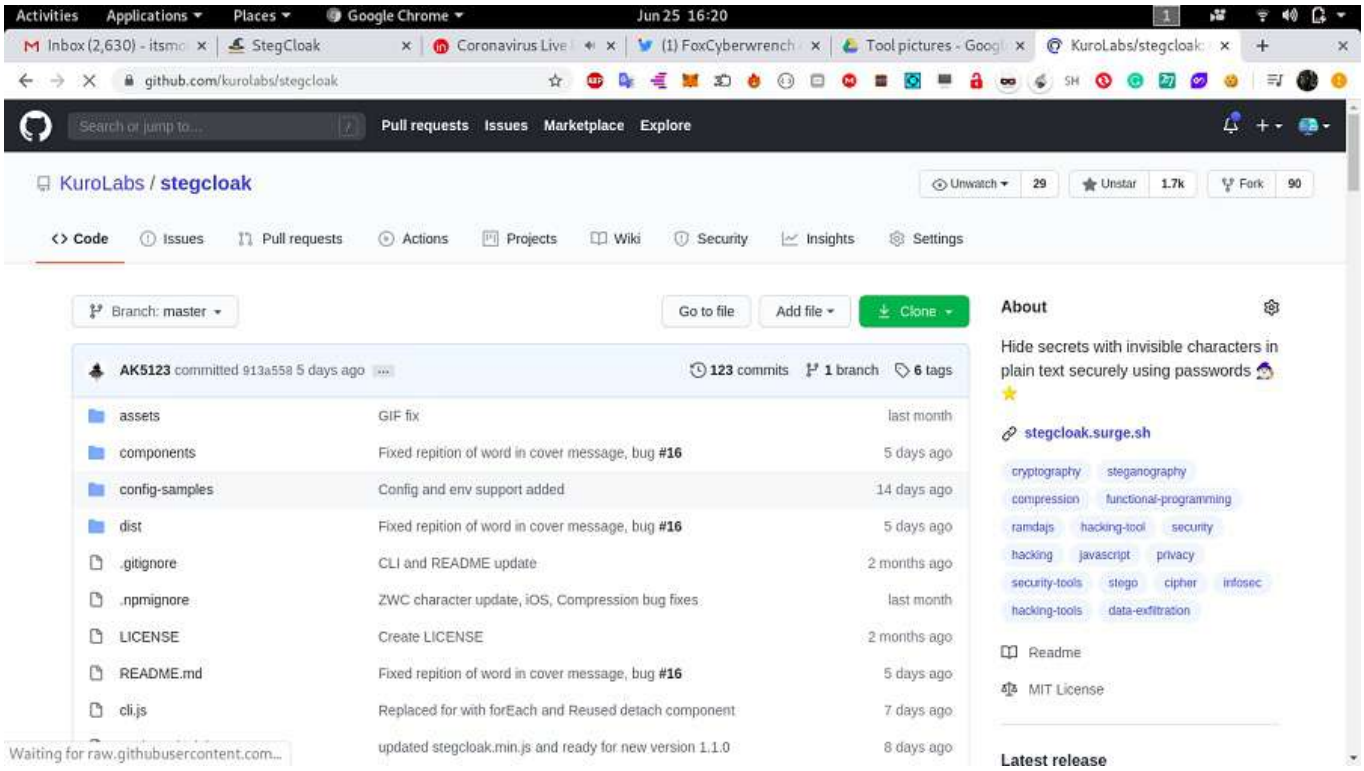
Step 2: Stegcloak hides fingerprint



Step 1: People-tweet-it-copy pasting from the website



Step 4: Password reveal



Through the Shiv Nadar Foundation we were connected to and interviewed by The New Indian Express, India today and our project was published on 30/06/2020 on their edexlive website. Prior to this, David Walsh, a senior software engineer from Mozilla invited us to write a guest article on his famous blog – DWB.

The medium article of the project has gone viral through exclusive curation of "Google's articles for you", Kitploit (a leading source of security and hacking tools), and in Medium having received 45K reads. Also trending in Reddit and twitter where it was shared by renowned cybersecurity professionals.

Additionally, the work done by us was appreciated by the open-source community and has received 1.7K stars in Github securing the #1 position in steganography tools. People started to write blogs, built tools over it and contributed to Stegcloak with 9 Pull requests as of now. We would like to thank HOD mam and Anand sir from marketing for supporting us.

Mohanasundar M, Kandavel A ,Jyothishmathi CV
IV Year

This is featured in the New India Express edex-Live
https://www.edexlive.com/happening/2020/jun/30/stegcloak-anyone-these-ssn-students-crypto-software-lets-you-send-secret-messages-in-text-messages-12968.html

INTERN INSIDER

I am Tushar Shah of Ist year. Here is an account of the internships I completed with two firms.

360 Degree Cloud:

360 Degree Cloud is a Salesforce Certified Consulting Partner that offers Salesforce Consulting, Implementation and Integration services to industries from all walks of life. The company was founded in 2012 with the aim of delivering top class solutions and domain expertise by developing, deploying and handing over effective Salesforce solutions that propel the growth of clients business.

Ever since then, the company has successfully cemented its position as an industry leader on the back of its state-of-the-art, scalable and cost-effective solutions. Post collaboration, our customers have witnessed increased engagement, improved performance and more sales, all thanks to 360 Degree Cloud services and solutions.

The Climber

The Climber is an Education Startup that helps students discover and pursue their Passions through MyCaptain and large city wide Youth fests, summits and bootcamps. MyCaptain by The Climber is an Online platform that helps you take the first step in your field of passion with the help of young achievers, mentors and guides. We are focused towards the United Nations SDGs (Sustainable Development Goals) especially SDG 4: Quality Education, SDG 8: Decent Work and Economic Growth and SDG 17: Partnerships for the Goals.

MY PHD AT IIT-MADRAS

I am Sowmya S Sundaram, an alumnus of CSE Dept, SSN College of Engineering. I was recently awarded PhD in CS from IIT-Madras. Here is an account of the journey. Bear in mind that this is simply a single data point and everyone's experience is different. With that disclaimer, let's get started.

First of all, I had no idea what a Ph.D. would entail.It was Bala Sir who introduced me to the admissions brochure for Direct Ph.D.

He got me in touch with another senior from SSN who was on the verge of completing her Ph.D. there. My understanding grew. But my experience couldn't have been more different from hers. I applied for the Direct Ph.D. position. In the last round of interviews, I recollect feeling overcome with trepidation, being the only one in a room with 15 professors interviewing me. I joined the program in 2013. Despite the remarks that claimed prospects post Ph.D are weak, the beautiful forest campus felt home. And I started my course work.

Initially, everything was a breeze. I finished my course-work fast, within a year, with a formidable GPA. I passed my comprehensive exam and was awarded the prestigious TCS scholarship for research scholars. The usual modus operandi was to do a bunch of small research projects, get them verified at conference venues, connect with people and collect them into a holistic work with additional research and present a journal paper. Even before my research proposal seminar, I had a conference paper.

After this, however, nothing progressed. Me and my colleague (who was working on a very similar problem) explored a lot of material. We became convinced that our methodologies wouldn't scale well. By the time we had our research proposal seminars in 2016, we did not have any clear road map on the solution. I improved upon my previous work slightly and had another conference publication in 2017. By then, I started panicking that the elusive mandatory journal paper was nowhere in sight.The problem seemed too vast for a beginner to attempt.

In spite of this, we managed to make some progress on small aspects of the problem and published another conference paper each in 2018. This gave me a chance to go to Montreal, Canada on a fully funded trip. Presenting my work there, is a blessed memory for me.

By 2018, the dreaded 5-year review meeting was scheduled. After a lot of thought and review, it was decided by the DC to change our advisor. While this meeting was happening, I worked on a new perspective for a journal paper. Contrary to my earlier plan of piecing things together, I instead developed a new algorithm. Despite having requisite depth, I was not able to publish this anywhere.

By mid-2018, we had a new advisor. He was an alumnus of IIT-M, working as a lecturer in UK. He understood the situation and focussed on one thing solely – to obtain the requirement of a journal paper. We now completely changed our areas, and equipped ourselves through a rather steep learning curve. By Nov 2018, we submitted a new work to a journal. Our new advisor was fairly confident of it being accepted and we now worked on a fun tutorial, where we aimed to present a survey of the methods involved in this particular area. We submitted the tutorial proposal by the end of January, 2019.

The journal submission was rejected without any reviews. We scrambled in the last minute and submitted to a highly reputed conference, hoping that if it gets selected, it will be considered equal to a journal paper. By now, however, our advisor felt it might be too risky to bet on it. While brainstorming, I timidly brought up my abandoned journal manuscript. He helped me enhance it with the nuances of technical writing and we submitted it to another journal. At this point, another worry came to my mind. The stipend was draining. Fast. I hadn't saved much of my stipend across the years and by June 2019, my stipend would end. At this juncture, conveniently Amazon came to campus in search of PhD interns! I happily applied and was accepted.

However, in June there came an opportunity to go to UK and collaborate with my new advisor. The idea of undertaking this travel, with little funding, was a daunting decision. In this situation, it was the money I had actually saved in SSN, from the merit scholarships, that helped me make this trip. I deferred my internship till December 2019 and worked on exciting projects in the UK. TCS was kind enough to extend my scholarship for another 6 months, and later on fund my UK trip in retrospect.

I deferred my internship till December 2019 and worked on exciting projects in the UK. TCS was kind enough to extend my scholarship for another 6 months, and later on fund my UK trip in retrospect. To our great joy, both our journal manuscripts were accepted! The conference paper I had submitted went through a series of rejections and was finally accepted at AAAI 2020, one of the most top ranked conferences. I presented the same in New York, in Feb 2020, just before the pandemic started. I also presented the tutorial in Germany, in Sep 2019. The minute I came back from the tutorial, I began writing my thesis in earnest. I completed the requisite mile-stones and submitted my thesis on Jan 2020. And if you're with me so far, you would have noticed it was time for my internship at Amazon, which I started in December 2019.

As the grand finale of the whole process, the defence was conducted online on April 23, 2020. And with that, this highly rewarding journey came to an end. At present I am working on a post-doc at L3S Research Center, Germany from home due to covid.

In this journey, whenever something went wrong, my commitment towards completion was my only motivation. I jumped into the deep end without any warning and learned to swim. I realize only now, that what kept me going was that I actually enjoyed research immensely.

One thing is that this journey has made me more sensitive to the needs of the mind, discovering problem areas in thinking that caused unnecessary stress and helped me become far more assertive. The second aspect is that education and financial liberation frees everyone, especially women, to explore things their mothers and grand-mothers could only dream of. For every woman who goes into unchartered territory, they become role-models for many more to emulate, much like the many professors at SSN!

This is a rare path. There is an amazing freedom in academia, where you are in charge of exploring problems that interest you, not problems a particular business has designed for you. A Ph.D. is a space for exploration and growth. You learn a lot of skills that make you independent, resilient, creative and a risk-taker. No wonder many professors also become entrepreneurs on the side! I hope this story gave you an idea of what a Ph.D. means and what it can offer. This is not a definitive guide; it is but a bird's eye view. Please feel free to reach out to me with the contact details available at my website ***(https://sites.google.com/view/sowmya-s-sundaram).***

ALUMNUS TALK

Satish Palaniappan talks about his winding journey from SSN to Microsoft.

The hardships, pitfalls and pleasures- how the right minset, people and hardwork can take you places

This is Satish Palaniappan, I am currently working as an Applied Machine Learning Engineer at Microsoft.

Coming from Madurai, being a timid 12th grader who joined SSN 8 years ago, I definitely feel like I have come a long way today. When I initially joined SSN, I was very intimidated by my surroundings, mainly because I stutter when I talk, my English was not that great, and I was away from home in a new place, but I would definitely attribute it to SSN, for embracing me for who I am, kindling my thirst for knowledge, and making me the best at what I do today, I am not exaggerating even a tiny bit when I say this.

The first couple of years at SSN were about building a strong basement for what was about to come, I used to learn new programming languages, take part in all the department activities, I was the board member of various computing clubs like ACM, organizing events, tech talks, etc. Most importantly, SSN is where I met an amazing and super-intelligent set of peers who later became friends for life, who continuously keep inspiring me to want to achieve more!

The faculty at SSN have a knack for finding talent and believing in your capabilities, one such faculty, by the end of my second year, insisted that I apply for this Machine Learning internship opportunity with Carnegie Mellon University, with the deadline being just a day away they made sure all my LoRs got through in time and helped me with my SoP too! And, guess what, the faculty were right in trusting me, I was picked as one of the 44 students from the thousands across India who applied to attend this internship.

This 14-day internship was a turning point in my life, it challenged me in several ways, I was about to quit due to the immense competition there, but perseverance is something every SSNite has instilled in them. So, I ended up sleeping just two hours every day during this internship, constantly trying to learn, hack, design and code my way through this internship.

Every day I had to give presentations in the morning about my work the previous day, in front of an intimidating group of peers, because I had stage fear and knew nothing about Machine Learning, and you wouldn't believe me if I say, by end of the 14 days I transformed from a person who had zero knowledge in Machine Learning to building an Emotion Recognition algorithm using NLP for text data!

And, the most key aspect here is that I discovered that whenever I talk about technology I was able to overcome my stuttering, something I was struggling from my childhood, and express a lot of self-confidence, just because I was passionate about Computer Science. If not for SSN and the Computer Science department faculty I wouldn't have even known such an opportunity exists.

From then on, everything was up-hill, one of my other significant internship opportunities was with the Institute of Mathematical Sciences, which was a result of me participating in one of the hackathons held at SSN, and one of the panelists there was super impressed by my work and offered me a Research Assistantship under Prof. Ronojoy Adhikari. In this internship I ended up building a Computer Vision based Optical Character Recognition Engine for the 4000-year-old Indus Valley Civilization Scripts. And, my research there became very popular and it gathered a lot of media attention from The Verge, The Hindu, Times of India, and SBS Radio Australia. I also ended up giving a lot of talks about my research to huge rooms full of smart people!

Don't get me wrong, my life at SSN was not super stressful because of everything that was going on around me, in fact, I had the most fun while doing all of this at SSN, my final year project was to build an Image Captioning model for Pokémon battle images, now you tell me!

Parallel to all this I was also interviewing with top companies who came to SSN for placements, and I ended up securing a dream-job offer from Qube Cinema technologies, where I worked on Machine Learning and Algorithm Design. My job involved applying Computer Vision to build a viewer demographics mining engine for theatre auditorium images and also designing resource allocation and scheduling algorithms to route/plan movie releases across the globe!

After working for two years at Qube, I took off to do my Masters in Computer Science at the Johns Hopkins University (JHU), where my research was focusing on building explainable Deep Learning and Computer Vision models for healthcare applications, and during my time there I was also a Teaching Assistant for two graduate-level courses on Deep Learning and Object-Oriented Programming, and I also interned at Amazon (AWS) during my time there.

And now, I just recently graduated from JHU and joined Microsoft, working on improving self-help experiences in M365 products, that scales to billions of users, using Machine Learning!

One thing I would like to add here is that, once I was invited by my mentor at SSN, Prof. Milton, to give a talk in one of the Faculty Development Programs about my Indus Script work, the room was full of faculty from all over India, and my faculty from SSN were cheering for me throughout the talk.

For me, it was a great milestone, from being a timid boy from Madurai, who had stage fear, who stutters and who had no self-confidence, to being able to deliver a talk to a room full of faculty from across India, was really humbling, while my own faculty from SSN were rooting for me! For everything I am today, I am forever grateful to SSN, my HoD Dr. Chitra Babu, my mentors, my faculty, and all my friends at SSN, for I am nothing without all these amazing people in my life, who inspire and motivate me every single day!

POETRY & PERSPECTIVE

In times turn uncertain, we find the strangest of comforts in the verses of a poem.

BORROWED TIME

Sand trickled down the narrow path
Time ticked with every passing grain
One bulb turned empty, the other turned full
As time ticked by mercilessly

Every grain turned into that of lost time
Every grain relished the present turning into the past
But would it stay hidden and beneath the sands of the present?
And pave way for old and bygone memories to be cherished
Or would it hide in plain sight above the sands of time?

Fresh and raw from its smiles and hidden scars
Every granule would bid it's goodbye
Falling through its chosen path effortlessly
So would every second of time pass by
without even a final adieu

The sand was however finite,
Eventually it would stop falling and running
Time was limited and it would outrun us all
And hence would come a point,
A point where no more sand is left to trickle down

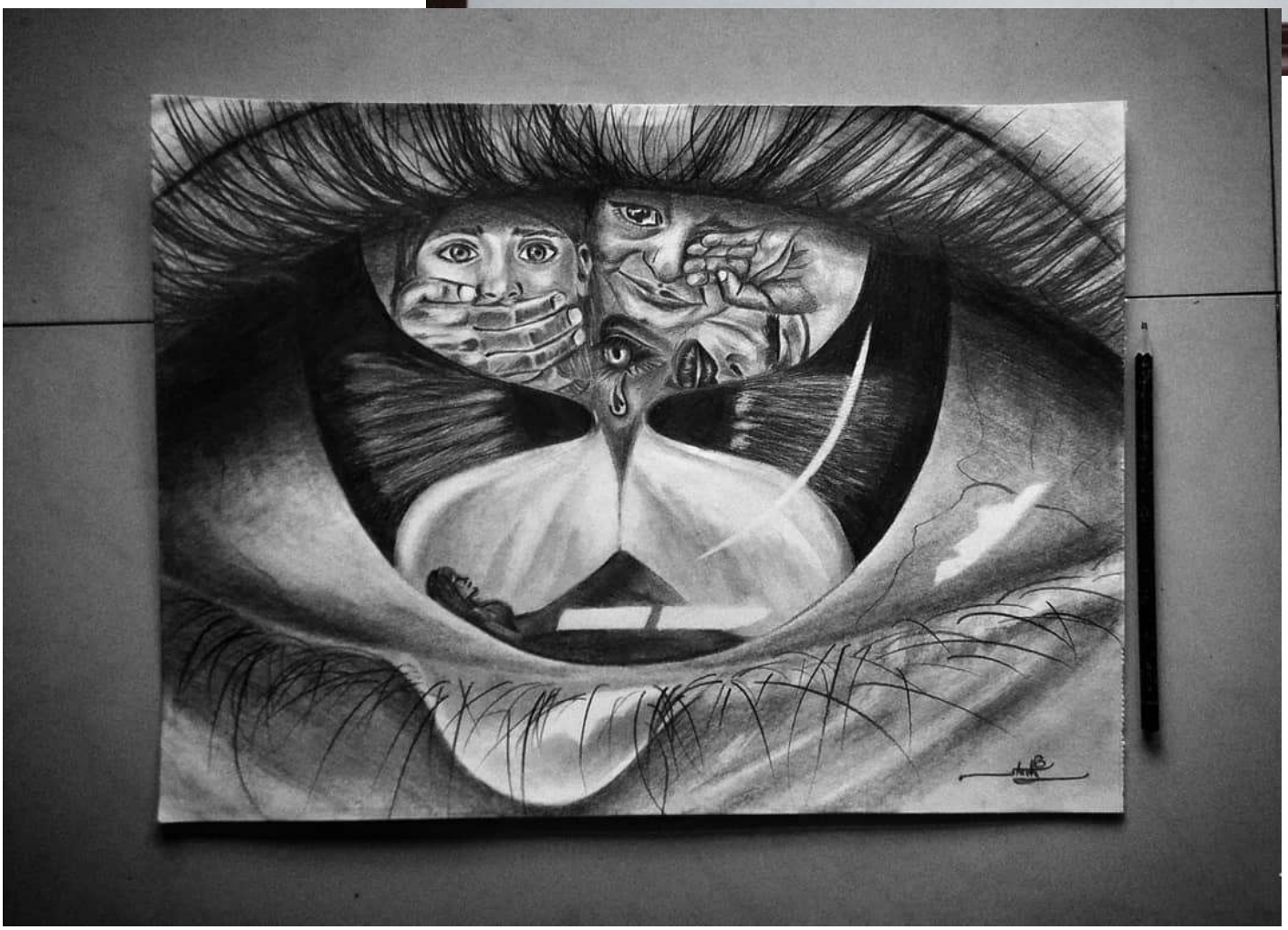
And that is when the hourglass is turned
And time would start ticking again
But this time would be different from before
As we would be living on borrowed time.

-Aarthi.N , CSE - A, First year

PAINTINGS

The woods are lovely, dark and deep. But I have promises to keep,
And miles to go before I sleep.
- Robert Frost

By K Abhishek, 3rd Year

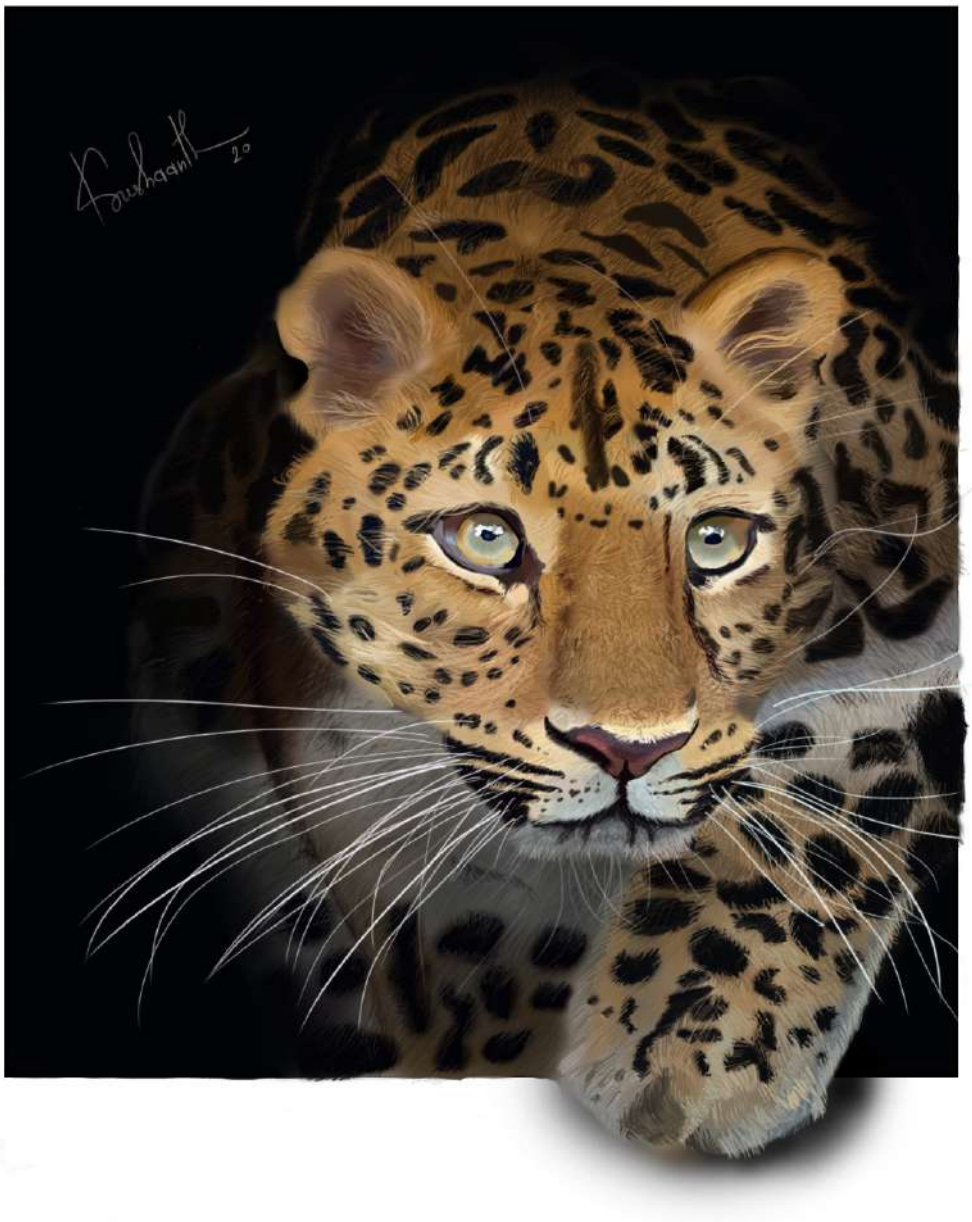


Shriya Baskaran , II CSE

DIGITAL ART

Tyger Tyger, burning bright,
In the forests of the night;
What immortal hand or eye,
Could frame thy fearful symmetry?

- William Blake



-By Sushaanth Srinivasan

EDITORIAL TEAM

CHIEF EDITOR

DR. CHITRA BABU

HOD/CSE

STAFF EDITORS

MS. A. BEULAH

AP/CSE

MS. S. ANGEL DEBORAH

AP/CSE

STUDENT EDITORS

II YEAR

KARTHIKA MENON

SAKTHI SAIRAJ

III YEAR

HARRINEI KUMARAVEL