Adarsh Pal Singh

+91-7030310885 | adarshpal.singh@research.iiit.ac.in | adarsh1001

EDUCATION

IIIT HYDERABAD
B.Tech. and M.S. by Research
Electronics and Communication
Expected Graduation: 2020
Cumulative GPA: 9.28

RELEVANT COURSES

Statistical Methods in AI
Data Warehousing & Data Mining*
Algorithms & Operating Systems*
Comm. & Computer Networks
Digital Signal Processing
(* Currently pursuing)

ACHIEVEMENTS

• Invited to give a **lightning talk** on 'Deploying Collaborative Machine Intelligence to the Edge' at the **Open Networking Summit**, Europe 2018.
• **World rank 24** at American Astronautical Society's annual competition, **CanSat**.
• **Dean's List-1** for semesters 3 and 4.
• One of the 10 teams to be selected for the **Make in India** Hackathon, 2016.
• AIR 40 in the National Creativity Aptitude Test (NCAT), 2015.

POSITIONS

• **Teaching Assistant** for Embedded Hardware Design and Electronics Workshop-II.
• Coordinator of Pulsation 2018, an umbrella term for hardware events at college's annual festival, Felicity.
• Part of the organizing committee for India-EU ICT standardization developer's tutorial 2018 held at IIIT-H.
• Student member, IEEE.

SKILLS

PROGRAMMING

Day to Day:
Python • C/C++ • Ansible • Matlab
Familiar:
Shell • Verilog

TECHNOLOGIES

Worked on:
IoT • Machine Learning • Kubernetes • Raspberry Pi • Arduino

EXPERIENCE

OPNFV | Linux Foundation Networking Intern

May 2018 – Present | Remote

- This project revolves around the implementation of a **kubernetes**-based edge cluster supporting cloud-native framework on which exemplar micro-services can be deployed with ease. The system will also be integrated with **Clover**.
- As of now, the kubernetes edge cluster has been built using six Raspberry Pi 3 boards and a live video streaming micro-service is currently being tested on it.

RESEARCH EXPERIENCE

SIGNAL PROCESSING & COMMUNICATION RESEARCH CENTER

May 2017 – Present | IIIT Hyderabad, IN

- Pursuing research under Dr. Sachin Chaudhari on the application of **Machine Learning** towards smarter **Internet of Things**.
- Worked in collaboration with the IoT Lab at NTNU, Norway on human occupancy estimation in rooms using machine learning models trained on data collected from deployed environmental sensors. Publication proposal submitted in GlobeCom 2018.

NTNU INTERNET OF THINGS LAB | Research Intern

May 2018 – July 2018 | Trondheim, Norway

- Worked under Prof. Stefan Werner and Dr. Frank Kraemer on the problem of value of information based intelligent sleep/wake scheduling of sensor nodes in wireless sensor networks and the role of machine learning in achieving the said paradigm.
- Work on the aforementioned research problem is still in progress.

INDIAN INSTITUTE OF SCIENCE ECE DEPT. | Research Intern

May 2016 – July 2016 | Bangalore, IN

- Worked under Prof. K.J. Vinoy on RF energy harvesting in the FM band for micro-sensor nodes. The internship consisted of literature survey and harvesting circuit design on Agilent ADS tool.

SELECTED PROJECTS

Song Popularity Predictor | hdf5, sklearn, python

- Worked on the Million Song Dataset (MSD) to develop a learning algorithm that could classify a song into different levels of popularity using musical features and other song metrics.
- This three week long project consisted of data retrieval from HDF5 MSD files, data preprocessing, PCA and t-SNE based data visualization and model building using supervised and deep learning algorithms.

WhatsApp-based Smart Doorbell | embedded system, python

- Built a functioning prototype of a smart doorbell system capable of sending pictures and audio recordings of a visitor at the door to the owner's WhatsApp account. A single-board computer was deployed along with audio and video peripherals and the control algorithm was written entirely in python.

Vowel Onset-point Detection | dsp, matlab

- Conducted digital signal analysis of short audio recordings in Matlab to develop an algorithm capable of detecting vowel onset points in speech signals. Three different signal processing techniques were explored for this task.