Rohit Rangwani

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EDUCATION

Master of Science, MS | Texas A&M University, College Station, TX **May 2020**
Electrical Engineering, GPA: 3.6
Courses - Pattern Recognition, Probabilistic Graphical Models, Neuro-electronics, Artificial Intelligence, Data Mining

Bachelor of Technology, BTech | National Institute of Technology, Warangal, India **July 2012- May 2016**
Electronics and Communication Engineering, GPA: 7.88/10

WORK EXPERIENCE

GPU Software Intern| Samsung ACL, San Jose, CA **May 2019 – Aug 2019**

- Developed an independent library for converting internal GPU format memory buffers (OpenGL/Vulkan formats) to human interpretable outputs(raw/PNG) & vice-versa, for debugging/testing of various tools and GPU driver.

Engineer | Qualcomm, Hyderabad, India **July 2016 - Aug. 2018**

- Developed & supported NFC (Near Field Communication) on Android utilizing C/C++/Java for support across layers (kernel driver, middleware/HAL, apps), successfully completed bring-up of NFC on more than 6 different platforms.
- Individually owned and developed various test utilities (factory testing, etc.) in C and test automation scripts in python saving significant repetitive developer test effort and easier factory testing
- Received 6 **Qualstars** (Qualcomm's Recognition Program) for critical contributions to different projects

RESEARCH EXPERIENCE

Student Technician | Integrated Neuro-Prosthetics Labs, Texas A&M University **Aug 2018 - present**

- Engaged in research focused on sensory feedback/augmentation for robotic-human interfaces and neuro-prosthetics

Research Assistant | MuSAE Lab, INRS-EMT, Montreal, Canada (funded under MITACS GRI award) **May - July 2015**

- Utilized NumPy, sklearn, etc. in python to design a self-paced Motor Imagery BCI system which can be used for real-time application without need of extensive training or high computation power
- Hacked an Emotiv Epoc+ for EEG acquisition in sensorimotor area for easier online application

SKILLS

Programming skills - C, C++, Python, Java, MATLAB, etc.

API/Libraries - NumPy, SciPy, scikit-learn, pandas, TensorFlow, keras, matplotlib, cuda, etc.

Hardware Skills - ARM based MCUs/MPUs, Arduino, Raspberry Pi, Particle Photon, EFM32, TI MCUs, PCB designing, etc.

RECENT PROJECTS

Reinforcement learning - Checkers solver AI | May 2018 - course project for Artificial Intelligence class

- developed checkers solver agents based on alpha-beta pruning and reinforcement learning(Q-learning)

Quick Draw! Doodle recognition | Dec 2018 - course project for Pattern Recognition class

- explored and used RNNs (LSTM) and CNNs (MobileNet, DenseNet) to develop a sketch recognizer for noisy labelled data from the Quick Draw! dataset and obtained top3 accuracy of ~92.1 using CNNs

Inference for diagnosing congenital heart disease | Dec 2018 - course project for Probabilistic Graphical Models class

- implemented Pearl's Message passing algorithm for Bayesian network in python; disease inference on CHILD dataset

Keratoconus Analysis and Hypothesis Testing (KAHT) | July 2017 – improv detection of keratoconus (corneal disorder)

- worked on optical character recognition for data extraction, and comparison of combination of various supervised and unsupervised machine learning techniques to obtain better classification (98.97%)

LEADERSHIP & ACTIVITIES

Core Mentor | Innovation Garage, NIT Warangal **Aug 2015 - May 2016**

- Mentored students for various event including NITW hackathons, hacknights, etc.

Additional Secretary | ECE Association | Electronic Amateurs & HAM Club, NIT Warangal **Aug 2015 - May 2016**

- Organized large scale events & activities; mentored students for research, project ideation & development

Member of Technical Committee | IEEE WIC, Women in Computing, India Council **Aug 2014 - July 2015**

- Engaged in online committee activities along with volunteering for technical events and support