Amirtha Varshini Anbuchezhiyan Sindhanai

470-812-5349 amirtha255@gmail.com linkedin.com/in/amirtha-varshini-a-s-58420baa amirtha255.github.io

Education

Georgia Institute of Technology **Aug 2021 - May 2023**
Master of Science in Computer Science *Atlanta, Georgia*
Graduate Teaching Assistant of CS - 4605 / 7470 Mobile & Ubiquitous Computing - taught by Prof. Thad Starner

National Institute of Technology **Aug 2014 - May 2018**
B.Tech in Electronics and Communication Engineering - CGPA 8.9/10 *Tiruchirappalli, India*

Relevant Coursework

- Data Structures
- Intro to Grad Algorithms
- Machine Learning
- Deep Learning

Professional Experience

Qualcomm **July 2018 - August 2021**
Software Engineer in ADAS Platform team *Bengaluru, India*

- Created and designed Minidump feature on QNX RTOS with my team to collect a mini system ramdump. The time to download was reduced by 70% and the size of ramdump brought down from 12GB to 300 MB, enabling quicker analysis.
- Developed a GDB-based Python parser to extract info from system ramdumps for QNX SDP 710.
- Automated the process of parsing for testing teams, resulting in a 30% reduction of effort.
- Worked on FastRPC feature to offload real-time tasks from the CPU to DSPs, resulting in higher performance.

Microland **May 2017 - July 2017**
Software Intern *Bengaluru, India*

- Created dashboards to display data from Office 365 Reporting web service and customized Skype for Business reports.
- Programmed a local admin portal for performing Office 365 Admin activities using LAMP stack and Powershell backend.

Technical Skills

Languages: C, Python, C++ Familiar in HTML, CSS, JS, PHP, Bash, TCL
Libraries: PyTorch, Tensorflow, Scikit-Learn, Pandas, Numpy, OpenCV, Caffe, Keras
Technologies: Linux, QNX RTOS, ARM V8 architecture, CUDA, Flask
Machine Learning : Regression, Classification,Clustering, Decision Trees, Random Forests, PCA, SVM, Neural Networks

Projects

Computer Vision Tools for Non-verbal Communication in Interview Scenarios | *Pytorch, Caffe* **Aug 2021 - Current**

- Advised by Prof. James Rehg -Training Deep Neural Network (DNN) models using open-source datasets (like OpenPose) for non-verbal communications (NVC) such as pose and emotions.

Coursework Projects of ML 18661 Remote in CMU | *Scikit-Learn, Pandas, Numpy, Pytorch, Python* **Jun - Jul 2020**

- Analyzed COVID dataset and performed clustering to model covid growth rate in the US.
- Implemented a Multi-layered Perceptron Network to classify Fashion-MNIST dataset.
- Created a Decision Tree to predict if a user will like a song based on the Spotify Data set.

Low-cost intelligent vision in automotive | *Computer Vision, Python, C, Tensorflow, Caffe* **June 2019 - Oct 2019**

- Collected dataset of depth images using Kinect V2 mounted on a moving car, as the images are light-independent.
- Performed object detection on the depth images in real-time to recognize pedestrians and vehicles using retrained YOLO V3 CNN model with Coco dataset. The model was converted to DLC format to run on Snapdragon Neural Processor.
- Project selected as one of the top 6 finalists in Maker's Challenge of QBuzz, Qualcomm India's Innovation conference.

Real time hand gesture recognition | *Computer Vision, Python, C, OpenCV, Tensorflow* **Jan 2018 - May 2018**

- Based on gestures, controlled home automation setup and a robotic arm interfaced with an Arduino Uno to the laptop.
- First author of a paper presented in FAIML conference and published in ACM dl.acm.org/doi/10.1145/3459104.3459142
- Secured First Place in Final Year Project Competition of NIT Trichy in 2018.

Achievements

- Recipient of K. C. Mahindra Scholarship for Post Graduate Studies Abroad, 2021
- Poster on 'Automated Bug Triage with Machine Learning' selected for Qualcomm Machine Learning Summit 2019
- Received two Qualstars in tenure at Qualcomm for innovation and excellent delivery of results, 2018-2020
- Technical Blog Writer in publications like Hackernoon, Towards Data Science, 2018-2019
- Head of Web Operations in Probe, ECE Department Symposium of NIT Trichy in 2018
- System Administrator in Spider,the R&D club of NIT Trichy, 2015-2016
- Recipient of AIEEE Merit Scholarship for obtaining rank under 2000 (amongst 1.35M candidates) in JEE Exam, 2014
- Best Outgoing Student of my school in 2013