

# AMIRTHA VARSHINI ANBUCHEZHIAN SINDHANAI

☎ 470-812-5349 ✉ [amirtha255@gmail.com](mailto:amirtha255@gmail.com) [in linkedin.com/in/amirtha-varshini-a-s-58420baa](https://www.linkedin.com/in/amirtha-varshini-a-s-58420baa) [amirtha255.github.io](https://github.com/amirtha255)

## 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*

*Tiruchirappalli, India*

## Relevant Coursework

- Intro to Grad Algorithms
- Machine Learning
- Probability Theory
- Deep Learning

## Professional Experience

### Qualcomm

July 2018 - August 2021

*Software Engineer*

*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 reduced 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 30% reduction of effort
- Worked on FastRPC feature for QNX to offload real-time tasks from the CPU to DSPs, resulting in higher performance.
- Part of developing safety-critical features watchdog and secure policy

### 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, Familiar in - C++, HTML, JS, PHP, BASH

**Frameworks:** PyTorch, Tensorflow, Scikit-Learn, Pandas, Numpy, OpenCV, Caffe, Flask

**Technologies:** Linux, QNX RTOS, ARM V8

## Projects

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

- Advised by Prof. James Rehg - Developing a deep neural net for analyzing non-verbal communication in an interview

### 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 automotives | *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 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 | *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](https://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 ML Summit 2019
- Received two Qualstars in tenure at Qualcomm for innovation and excellent delivery of results
- Technical Blog Writer in publications like Hackernoon, Towards Data Science
- Recipient of AIEEE Merit Scholarship for obtaining rank under 2000 (amongst 1.35M candidates) in JEE Exam, 2014
- Head of Web Operations in Probe 2018, ECE Department Symposium of NIT Trichy
- Best Outgoing Student of my school in 2013