

# AMIRTHA VARSHINI ANBUCHEZHIAN SINDHANAI

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## 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

- 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 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](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 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