AMIRTHA VARSHINI ANBUCHEZHIYAN SINDHANAI

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EDUCATION

Georgia Institute of Technology   August 2023 - Expected
Masters in Computer Science
Graduate Teaching Assistant of CS 7470 Mobile & Ubiquitous Computing, taught by Prof. Thad Starner

National Institute of Technology Tiruchirappalli   July 2014 - May 2018
B.Tech in Electronics and Communication Engineering   Overall GPA: 8.90/10

PROFESSIONAL EXPERIENCE

Software Engineer in Qualcomm (Automotive Domain)   July 2018 - August 2021
- Created and designed Minidump feature on QNX RTOS with my team. The download time of a ramdump was reduced by 70% and the size was 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 ramdumps 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.
- Part of developing safety-critical features watchdog and secure policy, with ASPICE compliance.

Summer Internship in Microland   May 2017 to July 2017
- Programmed a website as an interface to the local admin portal for performing Microsoft Office 365 Admin activities and customized the data visualization of Skype for Business reports.
- Performed automation using Powershell scripts and extracted data from Office 365 Reporting web service.

Winter Internship in Extreme Networks   Nov 2016 to Jan 2017
- Automated the task of configuring VLAN in switches using Tcl scripts and monitored network. Developed a website for viewing the status of test cases to ensure the correct working of LAN switches

PROJECTS AND RESEARCH

Symantic Similarity of Questions in Quora   Sep 2021 - Current
Coursework project of CS 7641 Machine Learning   Georgia Tech, Atlanta
- Using Natural Language Programming methods Tf-Idf Vectorizer, Word2Vec on Quora Question-Pairs dataset and perform machine learning to determine the intent similarity of questions.
- Experimenting with state-of-the-art models LSTM, BERT in Pytorch.

Computer Vision Tools for Non-verbal Communication in Interviews   Aug 2021 - Current
Research Advised by Prof. James Rehg   Georgia Tech, Atlanta
- Training Deep Neural Network (DNN) model OpenPose on Caffe for keypoint detection of face and body.
- Evaluating and estimating non-verbal communications (NVC) such as pose and nodding in interview scenarios

Bonus Coursework of 18-661 Intro to ML for Engineers   May 2020 - July 2020
Summer remote course from CMU
- Clustering of COVID-19 Data and Modeled the growth rate of COVID in the states of USA
- Trained decision tree and random forests to predict user's liking of a track with Spotify Dataset
- Implemented a Multi-layered Perceptron based system to classify Fashion-MNIST dataset

Low-cost intelligent vision in automotive (LIVA)   June 2019 - Oct 2019
Qualcomm Maker's Challenge   Qualcomm, Bengaluru
- Collected dataset of depth images using Kinect V2 mounted on a moving car
- Performed object detection in real-time to recognize pedestrians and vehicles using retrained YOLO V3 model with depth images and Coco dataset. Converted models to DLC format to run interference on Linux Vehicle platform using Qualcomm SNPE (Snapdragon Neural Processing Engine)

Real-Time Hand Gesture Recognition system Jan 2018 - May 2018

Bachelor's Thesis NIT Trichy

· Built a real-time hand gesture detection system by retraining Inception V3 Architecture on TensorFlow
· Based on gestures, controlled home automation setup, and a custom-built robotic arm
· First author of a paper presented in 2nd International Conference on Frontiers of Artificial Intelligence and Machine Learning and published in ACM ICPS - **Paper Link**

SKILLS

Programming:	Python, C, C++, Familiar in SQL, HTML, CSS, JS, PHP, Bash, TCLl
Platforms:	Linux (Ubuntu), QNX RTOS, ARM V8, Cuda, Flask architecture
Libraries:	PyTorch, Tensorflow, Scikit-Learn, Pandas, Numpy, OpenCV, Caffe, Keras
Machine Learning:	Regression, Classification,Clustering, Decision Trees, Random Forest, PCA, SVM

HONOURS, AWARDS AND ACADEMIC ACHIEVEMENTS

Recipient of **K. C. Mahindra Scholarship** for Post Graduate Studies Abroad, 2021

Project on **'LIVA'** funded for prototyping as one of the **top 6 finalists out of the 230+ applicants in Maker's Challenge of QBuzz 2019**, the annual technology conference of Qualcomm

Poster on 'Automated Bug Triage with ML' **selected for Qualcomm ML Summit'19**

Received **two Qualstar recognitions** in Qualcomm for innovation and excellent delivery of results

Secured **First Place in Final Year Project Competition** organized by Sonata Software and Centre for Entrepreneurship Development and Incubation (CEDI) NIT Trichy in 2018

Recipient of **AIEEE Merit Scholarship for obtaining All India Rank 1448under 2000 (Top 0.1% amongst 1,350,000 candidates)** in JEE mains Examination, 2014

Among the **top 1 percentile in the country** in class 12 (AISSCE) examinations and qualified for **Scholarship for Higher Education (SHE) under (INSPIRE) program** ,2014

Was declared the **Best Outgoing Student** of my batch during class XII in 2013

One of 30 selected students to be part of the **Research Science Initiative at IIT-M, 2013**

COURSES

Data Structures And Algorithms	Deep Learning Specialization (Coursera)
Intro to Graduate Algorithms	Machine Learning

POSITIONS OF RESPONSIBILITIES

Head of Web Operations Oct 2017 - Feb 2018

Probe, ECE Department Symposium NIT Trichy

· Created a website for the symposium leading my team and handled online registrations for around 1800 students from various colleges via the site.

System Administrator April 2015 -April 2016

Spider, R&D club NIT Trichy

· Hosted the web portal for students dining allocation in NIT Trichy.

EXTRA-CURRICULARS

Technical writer in online publications -Hackernoon, Towards Data Science - 2019

Secretary and Co-Editor at Qonverse Toastmasters Club - 2019

Excomm member in National Service Scheme, Member of AIESEC in NIT Trichy and Engineers Without Borders