Rajesh Maheswaran

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Summary

- Experienced Research Assistant with a demonstrated history of working in the research laboratories
- Skilled in Python, C++, Java, C, and Android Development
- 2 years of experience in Android Development
- Strong research professional with a Bachelor's degree focused in Computer Science from one of India's top university

Technical Skills

Languages Known:	Java, C++, C, Arduino, Python, and Javascript
Database:	MySQL, MongoDB
Frameworks:	Node JS, Keras, Pytorch, Angular JS, Android
Tools:	Eclipse, LATEX, Android Studio, Octave, MatLab, NetBeans, Microsoft Visual Studio

Experience

Phoenix Robotics - Technical University Munich
Munich, Germany

RESEARCH ASSISTANT
May. 2018 – Aug 2018

- Worked on improving the computational costs of existing street sign detector system for a self-driven car system
- Implemented an image classifier for digit recognition using the Keras framework on the MNIST dataset with an accuracy of 99%
- Designed a Deep Neural Network model for shape segmentation(extracting street signs from images) with an accuracy of 89% using the Pytorch framework

Amrita Multi-dimensional Analysis Lab - Amrita University
Coimbatore, India

RESEARCH INTERN
Jan. 2016 - Apr. 2018

- Developed android apps that utilizes the Android Platform libraries like Networking, Power management, as well as hardware like IMU sensors and Bluetooth
- Primary area of research was indoor localization of robots and every day Android smart phones
- Reduced location estimation time by 20% by developing a middleware software on top of the Android framework for location estimation.
- Location estimates provided by that middleware software resulted in an accuracy of 1-2 m in dense environments
- Submitted a Research paper (Middleware for Cooperative localization on Android Smartphones) to IPIN (International Positioning and Indoor Navigation) Conference.

Projects

Location Services in Densely Indoor Mobile P2P Networks (Bachelor Thesis)
Coimbatore, India

DOMAIN: NETWORKING, INDOOR LOCALIZATION
Dec. 2018 - April. 2018

Problem: To design a method for efficient communication between nodes in an unstructured P2P network
Solution: Provide location services to the unstructured P2P network and use that information for efficient communication. Location services is not always available with GPS, hence other localization techniques like Multi- Dimensional Scaling and Dead Reckoning are used

Blood Flow Simulation using Lattice Boltzmann method
Munich, Germany

DOMAIN: SCIENTIFIC COMPUTING
June. 2018 - July. 2018

Problem: To develop an efficient blood flow simulation program; uses input data file
Solution: To increase efficiency, used Lattice Boltzmann method. This method allows parallel run on multiple processors for faster results

Pacer-Fitness App
Coimbatore, India

DOMAIN: ANDROID DEVELOPMENT, MACHINE LEARNING
Jan. 2017 - Mar. 2017

Problem: To develop an accurate fitness app to monitor steps taken and calories burnt
Solution: The step counter uses the IMU sensors on the phone to calculate the number of steps and velocity of movement. However to calculate step length, a liner regression model was used given the height of the person.

Squadra-Team Communication App

Coimbatore, India

DOMAIN: ANDROID DEVELOPMENT, WEB DEVELOPMENT *Aug. 2016 - Nov. 2016*

Problem: To develop a messaging app to communicate information and conduct polls between team membersSolution: Hosted a server and implemented respective API calls for the Android system to communicate with server

Co-curricular activities

Techfest Munich

Munich, India

SIEMENS CHALLENGE *June. 2018*

- Designed an innovative motion tracking system that can be used in devices like smart television
- Used the Teensy USB Development board with inbuilt motion sensors to control actions on the smart television
- Team size 5; my major contribution was interfacing with the android system and transferring information through Bluetooth.

Smart India Hackathon

India

MINISTRY DIVISION *April 2017*

- Developed an email classifier for Indian Ministry division to better organize and classify the emails. This classifier used logistic regression and classified emails with an accuracy of 95%.
- Team size 3; my major contribution was design of the classifier and design of the android application.

ICPC contest

Coimbatore, India

REGIONAL LEVEL *Mar. 2016*

- Participated in the ICPC regionals held in Coimbatore- India-South Division.

Education

Amrita University

Coimbatore, India

B.TECH. IN COMPUTER SCIENCE AND ENGINEERING *July. 2014 - June 2018*

- **GPA:** 9.65/10
- **Course Highlights:** Database Management, Data Structures and Algorithms, Android Development, Natural Language Processing, Web Development, Operating Systems, Compiler Design.
- **Education Abroad:** Foreign exchange program for one semester at the Technical University of Munich (TUM)

Nationality : U.S. Citizen