VARSHA SRINIVASAN

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EDUCATION

University of California, Santa Barbara **Dec 2019**
M.S., Electrical and Computer Engineering **CGPA: 3.75/4.0**
*C*oursework: Embedded Systems Development, Advanced topics in Computer Networks, Internet of things, Data Structures & Algorithms, Advanced topics in Distributed Systems, Mobile Embedded Systems, Computer Architecture-Parallel Processing. December 2018

SSN College of Engineering, Anna University **May 2018**
B.E., Electronics and Communication Engineering **CGPA: 8.5/10.0**
*C*oursework: Embedded and Real Time Systems, Computer Networks, OOPS and Data Structures, Microprocessors and Microcontrollers, Computer Architecture, Digital Signal processing.

TECHNICAL SKILLS

Languages	C, C++, Python
Platform	Raspberry Pi, Arduino, Nexys4 DDR FPGA, TI MSP 430, Atmel-AVR, ESP 8266, NodeMCU
Software	Raspbian, NodeRED, Arduino IDE, Zapier, Wireshark, Xilinx, MATLAB, Android Studio, Atmel Studio, CCS, Energia, Tanner, Git, Virtual box, REST Hooks, Electron, Flask.
Cloud	Amazon Web Services(AWS), Thingspeak, IBM:Watson Bluemix, Twilio, Firebase
OS	Linux, Windows, Raspbian, MacOS

EXPERIENCE

Logitech Newark, CA
Automation Integration Software Intern (Python, JavaScript) **June-Sept 2019**
- Designed and developed a scalable Automation Platform-As-A-Service technology on AWS, that helps integrate external apps, third-party APIs and cloud services with Logitech devices.
- Developed client-side application that links device firmware and the automation platform APIs.
- Integrated OAuth2 with REST Hooks based web application on the Zapier Platform.

CEERI (Central Electronics Engineering Research Institute Chennai, India
Embedded Systems Engineer Intern (Python) **June-July 2017**
- Developed firmware for an intrusion detection security system using Raspberry Pi 3 and PiCam.
- Interfaced different sensors including Sense HAT with Thingspeak and Adafruit cloud platforms.

PROJECTS

Cloud based secure parking system (C, Java) **Nov 2017-March 2018**
- Created a prototype for an efficient parking system that uses RFID technology to update vacant parking slots to the cloud, in Real-time. Deployed fingerprint sensor to ensure security of the system.
- Developed an Android App to display data from the cloud and route the user to the destination.

Comparison of Lightweight Application layer protocols used in IoT **Oct-Dec 2018**
- Explored the architecture and features of MQTT and CoAP protocols used in IoT and implemented them using Mosquitto and libcoap open source emulators using Wireshark to monitor network traffic.
- Evaluated performance using a real-world implementation with smart phone and laptop as publishers.

Asteroids game on Nexys 4 DDR FPGA Board (Embedded C) **Oct-Dec 2018**
- Developed firmware for a Real-time Asteroids game on the FPGA board by interfacing rotary encoder and LCD display to control the gameplay.
- Designed an FSM to schedule interrupt events for the game with varying difficulty levels.

Simulated distributed server-side bank transactions (Python) **Jan-March 2019**
- Used RAFT consensus protocol to maintain updated transaction history on 3 bank servers to ensure proper BLOCKCHAIN replication, and to ensure fault-tolerance from server crash failures.
- Implemented a modified blockchain for untrusted parties (servers) to come to an agreement.

AWARDS

Awarded 2nd prize in the 'IEEE Project expo' conducted in SCSVMV University, Chennai for 'Self-balancing Robot' project. **March 2017**

CERTIFICATION

´Kaizen Robotics Program' Level-1 & Level-2, by Lema Labs.
´Computer Communications' specialization by University of Colorado System on Coursera.
´Python Data Structures', 'Using Python to Access Web Data' by UMich on Coursera.
´AWS Certified Developer - Associate 2019' Course on Udemy.