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, Nexys 4 DDR FPGA, TI MSP 430, Atmel-AVR, ESP 8266, NodeMCU
Software	Raspbian, NodeRED, Arduino IDE, Wireshark, Xilinx, MATLAB, Zapier, Android Studio, Atmel Studio, CCS, Energia, Tanner, Git, Virtual box, Webhooks, Electron, Flask, Ngrok.
Cloud	IBM Watson, Bluemix, Twilio, Thingspeak, Adafruit, Firebase
OS	Windows, Linux, Raspbian, MacOS

EXPERIENCE

CEERI (Central Electronics Engineering Research Institute)
Embedded Systems Engineer Intern **June-July 2017**

- Developed firmware for an intrusion detection security system using Raspberry Pi 3 and PiCam.
- Interfaced different sensors and worked with the Sense HAT to build a weather monitoring station.
- Explored the Thingspeak and Adafruit cloud platforms to analyze data obtained from sensors.

PROJECTS

Cloud based secure parking system **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 and GSM module to ensure security of the system and alert the owner respectively.
- Developed a Real-time parking monitoring App to display vacant slots from the cloud and route the user to the destination using maps feature.

Comparison of Lightweight Application layer protocols used in IoT **Fall 2017**

- Compared the architecture and features of MQTT and CoAP protocols used in IoT and implemented them using Mosquitto and libcoap open source emulators and used 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 **Fall 2017**

- Developed firmware for a Real-time Asteroids game on the FPGA board by interfacing rotary encoder and LCD display to control the gameplay.
- Designed a finite state machine to schedule interrupt events for the game and coded the game with additional features like bullet animation, varying difficulty levels, scores achieved, lives left. publishers.

Handling server-side bank transactions using Blockchain and RAFT protocol 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, **C**hennai for 'Self-balancing Robot' project. **March 2017**

CERTIFICATION

Kaizen Robotics Program Level-1 (Summer 2015) 'Level-2', (Winter 2015), by Lema Labs.
Computer Communications' 4-course specialization by University of Colorado System on Coursera.
Programming for Everybody (Getting Started with Python)', 'Python Data Structures', 'Using Python to Access Web Data' by University of Michigan on Coursera.