Thomas Rind

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EDUCATION

Tufts University

Masters of Science: Computer Science	2019	GPA:3.78
Bachelor of Science: Computer Engineering	2018	GPA:3.45

Relevant Courses: Internet of things, Operating Systems, Web Programming, Computer Architecture, Data Structures, Algorithms, Machine Learning

WORK EXPERIENCE

DMC
Chicago, Il
Aug 2019 – Present

Systems Engineer

- Worked in cross-country team to develop a low latency, high throughput, radio mesh network stack using Google's opensource implementation of Thread, OpenThread.
- Set up continuous integration on Git Labs and tests using Mbed's Icetea testing framework for automating hardware performance testing, allowing for identification and monitoring of latency and throughput milestones.
- Participated in status talks to clients to keep up to date on projects and to get and provide input on preferred implementation.
- Updated and maintained older projects to continue proper usage without rendering units already in production to break.
- Worked on multiple projects at once, splitting time between them to effectively complete milestones in reasonable time.
- Reduced memory and power consumption on BLE devices, reducing errors and increasing battery time.
- Coordinated in rapid development of prototypes to reach and take advantage of the current market.
- Completed hardware checkouts to verify or identified and reworked PCB design issues for next board revision.
- Set up driver for audio codec chip to get correct output for VoIP implementation.

American Robotics
Marlborough, MA
May 2018 – Aug 2018

Software Development Intern

- Designed battery controls system to handle data transfers, and charging for autonomous drone-assisted farming.
- Reduced chances of battery related crashes through code updates.
- Created customizable redis graphing interface allowing stored data metrics to finally be analyzed.

Draeger Medical Inc.
Andover, MA
May 2017 – Aug 2017

Software Development Intern

- Implemented a demo USB CDC client application on micro-controllers for newly developed patient monitoring system for OEMs to develop with.
- Communicated with cross functional team in agile environment.
- Built debugging tool with QT to act as a host, display all signals dynamically, and record logs to let OEMs develop without the need to a full patient monitor.

MultiSensor Scientific
Somerville, MA
Feb 2017 – May 2017

Software Development Intern
- Replaced outdated UI for gas detecting camera with team of 4.
- Built tablet user interface in QT to wirelessly communicate with Raspberry Pi to stream camera and sensor info.
- Iterated through versions of interface to make use more intuitive and easy.

Tulip Interfaces
Cambridge, MA
Jun 2016 – Aug 2016

QA Intern
- Decreased software defects and increased the hardware construction with streamlined manufacturing and QA.
- Performed weekly QA tests of web platform to determine if latest builds should be pushed to production.
- Reduced debugging time with implementation of hardware test bench and power cycling tool.

PROJECTS

Food Tracking Smart Shelf
Nov 2017 – May 2018

- Worked in team of 3 to plan, design, and develop prototype shelf to track food to lower food waste.
- Used KNN to autonomously determine what food was placed on the shelf.
- Built infrared array to detect where food was placed on the shelf and used load cells to determine mass of food.
- Used photon microcontroller to read sensors, push data to cloud which was read by raspberry pi and packaged in JSON and pushed to AWS server to be processed.

Swarm Bots
Feb 2017 – May 2017

- Design autonomous swarm bots to simulate landmine disposal in team of four.
- Designed ultrasound communication through band-pass filtering and processing.
- Designed path tracking by processing light reflectance into photo-diode.
- Integrated and debugged drive, sensor, power, collision, and control system.

Food Truck Tracker Web App
April 2016 – May 2016

- Built web app to track food trucks and notify users when they close and open in team of 3.
- Used Google Maps API, Node.js, MongoDB to record user requests and calculate trucks within one mile.
- Used Twilio to send texts to users about nearby trucks

SKILLS

Programming: C/C++, RTOS, Multithreading, Socket Protocol, Mbed, Mesh Neworking, Arduino, Python, Assembly, MATLAB, QT, JavaScript, HTML/CSS

Systems: Linux, Node.js, Git, Continuous Integration, Arm Processors, Debugging, BLE/Bluetooth, RaspberryPi