# Thomas Rind

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## EDUCATION

**Tufts University**

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|---|---|---|
| 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++, Mbed, Mesh Neworking, Arduino, Python, MATLAB, QT, JavaScript, HTML/CSS

**Systems:** Linux, Node.js, Git, AWS, MongoDB, Unity, LTSpice, Cadence, Arm Processors, BLE/Bluetooth, RaspberryPi