

Valeriy Soltan

☎ (508) 904-7060 | ✉ vsoltan@umass.edu | 🌐 vsoltan | 🌐 valeriy-soltan

Education

B.S in Computer Science and Statistics

UNIVERSITY OF MASSACHUSETTS AMHERST, GPA: 3.95/4.0

Amherst, MA

Expected: 2022

- **Awards:** Member of Commonwealth Honors College, Dean's List.
- **Relevant Coursework:** Algorithms, Data Structures, Physical Computing, Systems Programming.

Experience

OpenThings

FIRMWARE INTERN

Amherst, MA

May 2020 - PRESENT

- Integrated highly requested features into the OpenSprinkler product firmware, enabling users to pause programs and configure task execution order.
- Migrated notifications framework from HTTP to MQTT, reducing network overhead and providing support for communication between the sprinkler controller and off-the-shelf home automation hubs.
- Implemented front-end user interface for new firmware features using jQuery and CSS.

Undergraduate Course Assistant

COMPSCI 240: REASONING UNDER UNCERTAINTY

Amherst, MA

Spring 2020

- Helped manage the course by grading assignments, proctoring exams, and leading small group discussions.

Projects

Raytracing Accelerator

JAVASCRIPT

Spring 2020

- Used THREE.js to implement a ray tracer capable of rendering complex, super-sampled scenes with realistic lighting effects.
- Integrated a bounding volume hierarchy (BVH) acceleration structure, reducing the number of intersection computations and making render times ~40x faster.

Simple Watch

C, C++, JAVA

Fall 2019

- Designed a smart watch, including the PCB and firmware, that is capable of connecting to mobile devices via Bluetooth and a mobile companion app.
- Created a suite of applications to run on the watch, including a timer, music player, and a dynamic weather widget powered by OpenWeatherMap API.
- Implemented operating system elements like application save states, accurate time-keeping, and a scrolling navigation system.

Slide Business Card

SWIFT, OBJECTIVE-C

Summer 2019

- Managed a team of five developers to create an iOS application that encodes digital business cards into a scannable code, simplifying contact creation and sharing.
- Used Firebase to store user profiles and integrated Google and Facebook APIs to offer users multiple sign-in options.
- Refactored the entire code base to follow the model-view-controller (MVC) design pattern.

Awards

Real World Design Challenge

"MOST CREATIVE" NATIONAL MERIT AWARD

2018

- Designed a path-finding algorithm for an unmanned aircraft system to survey and eliminate crop infestation on a four-by-four mile field.

MathWorks Math Modeling Challenge

HONORABLE MENTION AND \$1000 PRIZE

2017

- Analyzed the risk of natural disasters to model the implications of climate change across the country.

Skills

Languages Java, C, C++, Python, JavaScript, CSS

Tools Git, Arduino, ESP 8266, React, Firebase, XCode, Android Studio