

# Oliver Vazquez

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## Education

### Northeastern University

BS in Computer Engineering &  
Computer Science December '21  
Boston, MA | GPA 3.67

## Relevant Coursework

Computer Architecture\*  
Artificial Intelligence  
Software Development  
Networks & Distributed Systems  
Object Oriented Design  
Computer Systems  
Algorithms  
Fund. Computer Science I/II  
Advanced Digital Design  
Digital Logic Design &  
Computer Organization  
*\*Indicates Current Enrollment*

## Skills

### Software

Proficient: Python, C++, C,  
JavaScript, Java  
Familiar: Bash, Verilog,  
x86 Assembly

### Tools & Frameworks

Proficient: React, Git, Unix,  
GoogleTest, Behave, JUnit

Familiar: Flask, React, Node,  
Keras, Figma, Firebase

## Honors

### Dean's List

Spring '18, Fall '18, Spring '19,  
Spring '20, Spring '21

### Dean's Scholarship

Fall '17

## Experience

### Portal Instruments

Cambridge, MA / my apartment

### Software Engineering Co-op

Jul '20 – Jan '21

- Implemented error handling to prevent unwanted i2c communication shutdowns in the event of a falsely detected Electrostatic Discharge event
- Upgraded device logging to correctly parse time-series data and record the device's hardware information
- Improved test coverage for new features using GoogleTest and Behave

### New Age Micro

Mansfield, MA

### Computer Engineering Co-op

Jul '19 – Dec '19

- Built a long-term test setup to stress test a communication protocol between Bedrock Automation programmable logic controllers (PLCs) and older Rockwell Automation PLCs
- Designed software to exchange continuously generated random numbers between devices, verify their correctness, and log any error occurrences, this software ran successfully over several weeks to demonstrate reliability
- Upgraded outdated test protocols and removed unnecessary tests to greatly reduce the amount of time required for a full regression test

### Northeastern University

Boston, MA

### Research Assistant

Sep '18 – May '19

- Assisted with the fabrication of microscopic magnetic resonators using a Physical Vapor Deposition (PVD) machine
- Evaluated performance using a MATLAB script and a probe to analyze the resonator's response at a range of frequencies

## Projects

### Spotify Playlist Generator

Personal Project

github.com/olivervz/spotify-playlist-app

Jan '21

- Built a React/Node app for fully random Spotify playlist generation
- Utilized the Spotify API and OAuth to provide users the ability to generate fully random playlists on their Spotify account

### Pneumonia Neural Network

Artificial Intelligence Term Project

github.com/olivervz/Pneumonia-Neural-Network

Apr '21

- Built Convolutional Neural Network to identify the presence of bacterial and viral Pneumonia in Chest X-rays, reached an 85% accuracy.
- Performed data analysis on output to observe a 99.48% true positive rate.

### Greenswitch

NASA Space Apps Hackathon

github.com/olivervz/greenswitch

Oct '19

- Built Flask application and used NASA solar irradiance and wind speed APIs to compare alternate solutions based on a user's geographical location.

