Gabriel Entov

141 Westminster Ave, Arlington MA, 02474 | (339) 927-0149 | gentov@wpi.edu

Education: Worcester Polytechnic Institute

Bachelor of Science: Electrical and Computer Engineering, Robotics Engineering — May 2019, **GPA: 3.85/4.0**
Master of Science: Robotics Engineering — Expected in Dec 2020, **GPA: 4.0/4.0**

Programming Languages: Python, Java, C, Arduino C, MATLAB, IDL, C++, Bash
Hardware: Electrical Circuits (op-amps, transients, transistors, etc), Sensors, Arduino, PIC, & Raspberry Pi
Other Software: 123D CAD Software, LTspice, Mentor Graphics, Multisim, Fusion 360, SICK Flexi-Soft Designer, LabVIEW
Operating Systems: Windows, Linux/Unix, macOs
Languages: Fluent in Russian, Proficient in Spanish

Work History

Electrical Engineering Intern at Vecna Robotics — May 2019 - Current

- Developed an automated system (both hardware and software) to thoroughly test and diagnose issues on the brains of their robots. These issues lead to timely and expensive troubleshooting if not detected early. The system's software is now a platform for testing future devices to come. Ported the system from Python to LabVIEW to ease development for technicians.
- Developed a GUI for factory workers to test the manufactured devices at scale. The GUI is designed in a modular and device agnostic way, so the same GUI can be used to test any device with virtually no modifications.
- Developed software tools to diagnose issues with robot's safety system remotely in real-time, without having to go on site.

Electrical Engineering Intern at Sensata Technologies — May 2018 - Aug 2018

- Developed circuitry and wrote software for a test box in order to allow it to interface with and test new sensors. The circuitry was developed into a PCB and the proprietary communication protocol itself was written in C.
- Developed two GUIs: one as a more robust executable on Windows, and a simpler one for the handheld box itself

Embedded Systems Intern at MITRE — May 2017 - Aug 2017

- Developed software for back-end of GPS application in C++
- Developed driver for new hardware to work with existing framework

Research Assistant at Kavli Institute for Astrophysics and Space Research — June 2014 - Aug 2016

- Reprogrammed an X-ray beam to map out its target in Python. Used to find where photon count was densest on the target
- Wrote IDL scripts for analysis of experimental data in real time

Projects (More Listed on LinkedIn):

Kinisi: Senior Capstone Project

- Was the lead Electrical Engineer on a team working to autonomize an off-road vehicle
- Developed the communication network between nodes, as well as control algorithms responsible for vehicle actuation
- Helped develop path planning and trajectory tracking algorithms, as well as made minor mechanical improvements

Autonomous Robotic Tasks:

- Programmed 3 degree of freedom arm to complete autonomous sorting tasks using computer vision and MATLAB
- Used Gazebo, rviz, and ROS to program a robot for a SLAM challenge. Robot could autonomously explore its environment, map it, and used A* to return to home

Software Engineering:

- Applied Agile development methodologies and software design patterns in Java to create (1) an online alcohol label submission form for manufacturers, (2) a form processing workflow application for US Treasury agents in the Alcohol and Tobacco Tax & Trade Bureau (TTB), and (3) an alcohol beverage search engine for the general public
- Implemented security features, "git diff" style change tracking, RFID integration, and CV features using the Tesseract OCR

A Greener Venice:

- Mapped all of the green spaces on the Giudecca Island with a team using a plugin developed for QGIS Software in Python
- Developed a methodology for land re-utilization including a rubric with weights calculated with MATLAB
- Created an application using javascript for people to continue adding data, as well as developed a plugin for QGIS in Python

Leadership and Awards:

Recruitment Officer for Rho Beta Epsilon, VP of WPI Club Tennis, ECE Capstone Lead, Eta Kappa Nu, and Tau Beta Pi