

# FRANCESCO PETRINI

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## Education:

**Major:** Computer Science and Engineering

**Minor:** Mathematics

**Concentration:** Robotics

Santa Clara University School of Engineering

Expected Graduation June, 2019

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## Programming Languages:

Python - Advanced || C++ - Proficient || C - Proficient || SQL - Proficient || HTML - Familiar ||  
Assembly - Familiar || Swift - Familiar || CSS - Beginner || PHP - Beginner || Bash - Beginner

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## Professional Experience:

### **Santa Clara University Internet of Things (SIOT) Lab**

January 2018-present

#### Undergraduate Researcher

- Developing a flood detection system for the San Jose mayor's office.
- Utilizing machine learning algorithms to train a model for river debris proximity detection and classification.
- Conducting various tests with Raspberry Pi 3s, measuring the combinational efficiencies of different hardware and open source software libraries (OpenCV vs TensorFlow), to minimize power consumption.

### **Santa Clara University Academic Technology**

June 2016-present

#### IT Field Support Technician

- Troubleshoot both hardware and software issues across various operating systems with limited information.
- Resolve multiple problems with customers both in person and over the phone, resulting in the greatest number of customer solutions of any technician of my class year or below.

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## Publications (*Preparing for Submission*):

### **Image Classification on IoT Edge Devices: Profiling and Modeling**

January 2018-present

- Conducted thousands of experiments in order to train a random forest model to predict the energy consumption of an IoT device performing image classification.
- Gained experience scripting in both Python and Bash for the purpose of critically analyzing hundreds of thousands of data points.

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## Projects:

### **iOS Application (Independent)**

June-July 2016

- Composed an application in Xcode using Swift.
- Experience with game asset creation, UI design, touch movement, and event-triggered audio integration.

### **Micro-Drone Build (Independent)**

April 2016-present

- Exposure to prototyping, soldering, 3-D modeling, and troubleshooting faulty equipment.
- Familiarized myself with CleanFlight software in order to customize the flight controller.

### **Web Development (Independent)**

April 2016-present

- Created my own, personal website using bootstrap, that resulted in increased familiarity with HTML and CSS.
- Refining my skills in web development by continuing to develop websites for friends and family.

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## Skills:

App Development/Design || Blender || Bootstrap Web Development || Database Management & Integration