Harrison Green
Computer Science & Microbiology

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Education

University of Pittsburgh - Honors College / Pursuing B.S. in CS & Microbiology
April 2021 (expected), Pittsburgh

- Cryptocurrency Club (President & Co-founder)
- Computer Science Club
- Robotics and Automation Society
- Information Security Club

Experience

IFM Technologies / Software Engineer Intern
June 2016 - September 2016, Chicago

Independently developed a drone control interface to be run on an embedded system with an Angular frontend and a NodeJS/Cassandra backend. Independently created a RESTful API server to run data processing jobs and to facilitate ROS/WebSocket communications between system components.

Channel IQ (Acquired by MarketTrack) / Software Engineer Intern
June 2015 - February 2016, Chicago

Developed .NET MVC UIs in C# to visualize and administrate large Cassandra datasets. Wrote automated Scala tasks to perform data processing with Apache Spark in a continuous integration workflow.

Projects

MiniBit - A CPU from scratch
harrisongreen.me/minibit

A working cpu built out of TTL and CMOS integrated circuits, 14 breadboards and a whole bunch of wires. Full schematic created with KiCad and entire cpu simulated with Verilog.

OCRaaP (Optical Character Recognition as a Program)
github.com/hgarrereyn/ocraap

An esoteric, 2d programming language where you draw programs on a piece of paper. Symbol detection/classification is performed with OpenCV and TensorFlow.

RoombaSIM
github.com/pitt-ras/roombasim

A drone simulation platform written in Python for developing high-level AI algorithms to solve the International Aerial Robotics Competition Mission 7.

Skills

Server: macOS, Ubuntu, x86, MIPS

Languages: Python, Java, Scala, C, Objective-C, Javascript

Tools: Git, GDB, Jupyter

Frameworks: NumPy, OpenCV, pandas, TensorFlow, ROS, AngularJS, OpenGL

Data: Cassandra, SQL, Apache Spark