Neil Chen

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EDUCATION

Columbia University, School of Engineering and Applied Science; Bachelor of Science, May 2019
Computer Science and Electrical Engineering; GPA 3.40/4.00
Relevant coursework: Advanced (Systems) Programming, Computer Science Theory, Fundamentals of Computer Systems

SKILLS

Proficient in Java, C, Python
Experience with C++, HTML, CSS, JavaScript, SolidWorks
Frameworks and tools Flask, Git, Make, NumPy, Perforce, ROS, SCons, TensorFlow

PROJECTS

Towards Automated Warehousing and Delivery
Implemented a speech interface for supplying SLAM navigation waypoints, and a web interface enabling color-following behavior. Built using ROS, Python, and OpenCV.
Book-Reading Bot, *2nd place of 1,000+ at HackMIT.*
Participated in a team of two to develop a page-flipping and book scanning machine for automated book scanning and audiobook generation. Built using C, SolidWorks, Python, and JavaScript.
A Novel Interface for Mobile Robot Path Planning, *1st place of 100+ at the New York City Science and Engineering Fair.*
Developed a graphical tool for plotting parametric paths for robot motion on a coordinate plane using Python.

EXPERIENCE

Qualcomm
Software Engineering Intern, May 2017 - Current
- Developed build framework automation tools for CDMA modem technologies
- Used C, C++, and Python to revise the unit testing infrastructure of Qualcomm RFA software development

Lamont-Doherty Earth Observatory
Sensor Engineer/Data Analyst, September 2016 - May 2017
- Performed sensor tests and implemented sensor automation tools using Python and C++.
- Worked on heavy-duty sensor enclosures and device management, including infrared camera and polarimeter equipment.

BlueStamp Engineering
Lead Instructor, April 2016 - August 2016
- Provided consulting and mentorship for mechatronics and software research. Created curriculum and instruction on real-time programming in C, software design patterns in Java and Python, wireless communication over HTTP, Bluetooth, and Zigbee.
- Optimized design techniques and rapid prototyping methods with electronics design, computer-aided modeling, and computer numeric control (CNC) fabrication. Improved prototyping times by up to 1 week.

WreadWrkr
Software Engineering Intern, June 2015 - August 2015
- Developed both frontend and backend technologies for a media aggregation and exchange site.
- Worked with HTML, CSS, SASS, JavaScript, JQuery, Meteor.js, and MongoDB to build a product within 2 months.

New York City Department of Education
Data Science Intern, June 2014 - September 2014
- Provided data research and logistics assistance in preparation for one of the first nationwide free pre-K programs.
- Performed data analysis using Excel macros and Python to improve early education accessibility for 70,000+ NYC families.

LEADERSHIP

Application Development Initiative , *Executive Committee Member*
- Conducted lectures and workshops on Python, HTML/CSS/JS, JQuery, Git, and hardware design
- Developed curriculum and provided mentorship for Columbia University's largest hackathon, DevFest (http://devfe.st/)
- Led a team of five developers renovating applications on behalf of the NYC Department of Education

Columbia University MakerSpace, *Superuser*
- Renovated computer numeric control (CNC) fabrication tools used by 1,000+ people monthly
- Managed 3D-printing and contactless smart card identification systems