Alex Renda

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EDUCATION

Cornell University, Ithaca, NY
Bachelor of Science, Computer Science, expected May 2018.
CS Coursework:

- CS 2112 : Object-Oriented Design and Data Structures – Honors — Fall 2014
- CS 2800: Discrete Structures — Spring 2015
- CS 3410: Computer System Organization and Programming — Spring 2015
- CS 3110: Data Structures and Functional Programming — Fall 2015
- CS 2024: C++ Programming — Fall 2015

Saratoga High School, Saratoga, CA
Graduated as Salutatorian, June 2014.

SKILLS

Proficient in Java, Python, C, Linux/Unix systems, machine vision, and git. Familiar with C++ and JavaScript.

EXPERIENCE / INTERNSHIPS

CS 2112 - Object-Oriented Design and Data Structures – Honors — August 2015 - Present
Consultant

- Answer student questions about course content, online and in office hours
- Develop course material and assignments
- Teach weekly lab sections about programming best practices, including documentation, testing, profiling, version control, and software design patterns

CUAUV - Cornell University Autonomous Underwater Vehicle — September 2014 - Present
Software Team Member

- Work collaboratively as a member of a large team
- Use machine vision to detect and classify different targets underwater
- Develop autonomous, priority-based routing and task execution systems

In 2015, I stayed the summer and worked full time with CUAUV. During this time, I:

- Refined the machine vision system that I wrote during spring 2015
- Developed machine vision modules using OpenCV, scikit-learn, and Caffe
- Worked on miscellaneous tasks involved with managing the software suite of an autonomous submarine, such as debugging CAN bus issues, managing the Linux install, and synchronizing desires with the motor controller

Tesla Motors, Palo Alto, CA — June 2014 - August 2014
System Validation Intern

- Wrote a user interface for test case management using Python/HTML/JavaScript/CSS. The tool guided users through a series of prompts and dynamically created complex queries based on user responses
- Designed and implemented a Python interface to automatically upload test case results to a server
- Developed an Android app to monitor results of automated regression tests

Android Development — May 2012 - Present

Developed and released several Android apps, including:

- An app that parses XML data about a popular video game and displays it in a graphical format
- A weight and balance calculator, which lets pilots check if their plane is safe to fly with its current weight distribution
- A nonlinear tower defense game

FIRST Robotics — September 2010 - June 2014

Vice President and software lead of my high school's robotics team

- Developed manual and autonomous control systems for FRC robots, utilizing PID control loops, machine vision, and network communication
- Wrote a Java graphical emulator for that let our team test code without a physical robot
- Created a scripting language to let us rapidly develop and test autonomous modes
- Held a weekly training session to teach club members to program FRC robots