

Education

Washington and Lee University – Class of 2018

Lexington, VA

Bachelor of Science, Computer Science

Overall GPA 3.74 | Major GPA: 3.95

Relevant Coursework: Algorithm Analysis, Theory of Computation, Computer Organization, Software Development, Deep Learning, Neural Networks & Graph Models, Linear Algebra, Distributed Systems (Fall 2017)

Extracurricular Activities:

- Secretary of Pi Kappa Phi, Rho Chapter
- Ice hockey team

Experience

AT&T Labs, National Security Division

Middletown, NJ

Software Developer

Summer 2017

- Designed tests to evaluate viability of transitioning to a cheaper Ethernet switch
 - Used Kernel Virtual Machine (KVM) to create and manage a VM ecosystem designed to generate traffic
 - Measured sFlow sampling drop rates, ACL down time, ACL load time, and other characteristics of the switch
 - Presented findings to group head which prompted a changeover to the new switch
- Developed software to facilitate transition between two types of Ethernet switches
 - Successfully converted sFlow metadata to desired NetFlow format by modifying a 5000+ line open source codebase
 - Wrote Python script to allow remote management of Access Control Lists
- Led team of ten interns in our final presentation to division of 600 members

Software Developer

Summer 2016

- Created a Java interface for an optical switch to programmatically manipulate switch state without learning Transaction Language 1
- Designed and developed optical switch simulator to allow programmers to test their code without the need of a dedicated switch

Washington and Lee University, Computer Science Department

Lexington, VA

Teaching Assistant

September 2015 – Present

Research Assistant under Computer Science Professor Simon D. Levy

Summer 2015

- Wrote programs in Python and Java to aid in the setup and flight of custom built miniature quadcopters
- Used OpenCV in Python to locate a 3'x3' colored landing pad which triggered an automated landing sequence
- Co-created Android app used to visualize output of drone's sensors and controller
- Used Tkinter in Python to create 3d model of a quadcopter to visualize IMU readings

AirLoom Energy

Solvang, CA

Software Engineer

Summer 2014

- Worked alongside CEO to prototype a quadcopter based platform to generate clean wind energy
- Wrote unit tests, modeled potential stresses using Autodesk Inventor, and designed testing rigs

Languages & Skills

Fluent: Java, Python

Working Knowledge: C++, Bash, SQL, HTML, CSS

Skills: Agile Development, Git, JUnit, LaTeX, Eclipse, Visual Studio, Linux, Autodesk Inventor

Recent Projects

Digit Recognition using Multilayer Perceptron

- Used supervised learning of the MNIST data set to reach 84% accuracy when identifying hand written digits

Android Ground Control Station

- Co-created Android app for configuration and testing of quadcopters
- App monitored output from key sensors (e.g. IMU and GPS) and input from controller

GooMPY: Google Maps for Python

- Created a Python-based interface for the Google Static Maps API
- Script downloads and stitches together static images allowing for dynamic zooming and panning

Personal Website

- Taught myself HTML and CSS while making alecsinger.com to showcase a complete list of my projects