

Jacob J. Nelson

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EDUCATION

- Lehigh University, Bethlehem, PA** Fall 2013 - Fall 2018
- Masters in Computer Science and Engineering, College of Engineering
 - BS in Computer Science and Engineering, College of Engineering **GPA: 3.82**
- Lehigh Silicon Valley, San Francisco, CA** Winter 2017
- Traveled to Silicon Valley to engage in live cases with entrepreneurs, venture capitalist, and designers. Collaborated with team members during the Fall 2016 semester to support a founder at the NASDAQ Entrepreneurial Center.

CLOUD COMPUTING

- Software Development Intern** | OSIssoft, LLC, *San Leandro, CA* Summer 2017
- Supported agile development of an Azure Service Fabric application by completing work items assigned from the backlog. Updated sample use cases for the product, refactored production code, and prototyped the adoption of prerelease technologies. C#, Python, Node.JS and Java.
- Cloud Security Case Study** | Lehigh University, *Bethlehem, PA* Spring 2017
- Studied co-resident based quality of service attacks by mimicking a research paper produced by Varadarajan et al. from University Wisconsin. VirtualBox simulated a hypervisor in test environment, running separate Ubuntu instances. C.

MOBILE COMPUTING

- WeightTracker** | Lehigh University, *Bethlehem, PA* Spring 2017
- Created a weight tracking app for Android, utilizing optical character recognition, to turn an ordinary digital scale into an IoT device. Image processing and recognition tasks were offloaded to an AWS hosted Flask backend. Java and Python.

INTERNET OF THINGS

- Junction 2016** | Aalto University, *Helsinki, Finland* November 2016
- Implemented the embedded software for an in-home elderly care system using sensors to track activity in the household of the user. Won the Artificial Intelligence award for ability to recognize potentially life threatening events. Python and C.
- PennApps XIII** | University of Pennsylvania, *Philadelphia, PA* January 2016
- Engineered an automated home monitoring system paired with a web application to detect smoke, carbon monoxide, water damage and extreme temperatures. Voted among the top 10 hacks. Python.

OTHER PROJECTS

- REU Internship** | Lehigh University, *Bethlehem, PA* Summer 2015
- Designed and implemented a voice controlled interactive story game for children with autism under the guidance of Dr. Mooi Choo Chuah. Developed a custom word recognition scheme based on word stemming using Natural Language Tool Kit (NLTK). Python.
- Unstrip** | Lehigh University, *Bethlehem, PA* Fall 2016
- Developed a Linux utility for the senior capstone project. It regenerates a symbol table for stripped ELF binaries by identifying library functions and finding user-defined functions. Second place in overall and peer's choice awards. Python and C.
- Software Engineering Project** | Lehigh University, *Bethlehem, PA* Fall 2015
- Applied OOP, agile development techniques, and software design patterns to produce a point of sale software system. Java.

SKILLS

Languages: Python, Java, C, C++, C#

Tools: Git, GNU Debugger, VirtualBox, JetBrains IDEs, Android Studio, Visual Studio, Flask, AWS, Azure

Subjects: Deep Learning, Parallel Computing, Mobile Computing, Cloud Computing, Network Security

CLUBS/INTERESTS

Clubs: Lehigh Programming Club (ACM), CREATE Club, Ski & Snowboard Club, Golf Club, Fly Fishing Club

Interests: Surfing, fly fishing, travel, scuba diving, coding, yoga, Spanish (language), backpacking, sailing, cooking, photography, guitar, hackathons