Elan Miller

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SUMMARY

Senior at Washington University in St. Louis pursuing a combined bachelors and masters in computer science and seeking a coop/internship for fall 2018. I particularly enjoy the intersection of mathematics and computer science. Interested in software development, data science, and/or network security.

EDUCATION

Washington University in St. Louis, St. Louis, Missouri, USA

- Bachelor of Science and Master of Science Candidate in Computer Science   Aug 2014 – Dec 2018
  - Cumulative GPA: 3.52 / 4.0
  - Dean's List
  - National Merit finalist award recipient

Relevant Coursework

Machine Learning Theory, Machine Learning Application, Bayesian Methods in Machine Learning, Cloud Computing, Artificial Intelligence, Rapid Prototype Development and Creative Programming

SKILLS

Experienced With: Java, Python, MATLAB, SQL, Linux

Comfortable With: Scikit-Learn, PHP, Angular, Node, Laravel, Swift, JavaScript, HTML/CSS

Have Used: Keras, C++, R, VHDL, Hadoop, Xcode, TCPDUMP, Wireshark, Arduino, Raspberry Pi, Android Studio, Flask

EXPERIENCE

Software Engineering Intern *Java, Spring, SQL*

Software Engineering Co-op with Intelligrated in Atlanta, GA   Jan 2017 – May 2017
- Developed, tested and deployed backend software for warehouse execution systems
- Developed APIs that were used by over 50 other developers
- Fixed over 60 bugs listed in JIRA

Research Experience for Undergraduates

Undergraduate Research Student at University of Nebraska-Lincoln   Jun 2016 – Aug 2016
- Created Python and Bash scripts to download and test the 100 most popular apps in the Android store, as well as 700 apps from a third party Android store
- Captured data leaks from the apps using Tcpdump and Wireshark
- Studied software middleboxes and examined ways that middleboxes can be used to prevent user data leaks among mobile devices

Software Engineering Intern *Keras, Flask, AWS*

Technology Development Program summer internship   Jun 2018 – Aug 2017
- Upcoming summer project is to develop a neural network for Optimal Character Recognition–OCR–and add it to a Flask app to be created and deployed in AWS.

OTHER WORK EXPERIENCE

Teaching assistant at Washington University, St. Louis, MO

Teaching Assistant for Rapid Prototype Development and Creative Programming   Aug 2017 – Present
  - In this class of 175 students, I grade projects and answer questions involving the full stack of web development including the use of Amazon Web Services, front and back end design and deploying code to a server

PROJECTS

Sentiment Analysis *Hive, Python, Hadoop*
- A program to analyze 34,000 reviews for Amazon items and determine how many stars are associated with each review.
- Achieved an accuracy of roughly 70% using an n-gram analysis approach

Lost Pet Site *Angular, Bootstrap*
- A site for people to upload data about a lost pet and/or search for their lost pet

Campus Dinner Report *Laravel, MySQL, AWS*
- Website to email and text kosher on campus dinner menus to subscribers
- Students sign up with their email and/or phone number and receive a message every morning with the kosher meal for the day

Machine Learning: Understanding Income in First World Countries *Python, Sci-kit Learn, Pandas*
- Ran various classifiers on the 48,000 samples in the Adult Data Set using 10-fold cross validation to determine the best classifier to predict whether a person makes over or under $50,000 a year
- Used random forests to determine feature importance, finding that age is the best predictor of income

ParkinSonar *Sklearn, Android Studio, AWS*
- Built an android app that can predict, based on user supplied voice recording, whether the user has Parkinson's disease.