William Li

1904 Jefferson Park Ave Apt. 40, Charlottesville, VA 22903 | 3460 Virginia Oaks Dr. Oakton, VA 22124
(571)-376-8782 | li.william811@gmail.com

Education

University of Virginia – Echols Scholar for the College of Arts and Sciences Charlottesville, VA

B.A in Computer Science and Mathematics, Cumulative GPA: 3.85 / 4.0 Aug 2016 – May 2019 (expected)

- **Coursework**: Design and Analysis of Algorithms (CS 6161) | Machine Learning (CS 4501) | Algorithms (CS 4102) | Advanced Linear Algebra (MATH 4651) | Stochastic Processes (MATH 4110) | Data Analysis with Python (STAT 3250)

Experience

Data Works Inc. Reston, VA

Software Engineering Intern Summer 2018

- Wrote hourly automated ETL processes in **Python** to scrape and stream metadata from high-traffic websites.
- Developed the backend libraries using **Python** and **Node.js** to automatically integrate ETL data with **Elasticsearch**.
- Created a notification system using **AmaonSNS** to push e-mail notifications to end-users when ETL errors occurred.
- Designed and created a comprehensive UI using **React.js** to show trends with graphical data, wrote an administrative control panel to add/remove sources, create and manage teams/subgroups, and customize end-user notifications.
- Constructed layered machine learning models using **sklearn**, **pandas**, **xgboost**, and **keras** in **Python** for analytics on ETL data. Error severity was predicted with 99% success rate, with the most severe errors being predicted with a 95% success rate. Integrated tiered error reporting into the notification system for smarter alerts.

MITRE Corporation Mclean, VA

IT Engineering Intern Summer 2017

- Conducted a mac OS Gap Analysis with the Mac Security Team to identify trending issues in mac support at MITRE.
- Developed a user survey for a final data analysis, delivered to over 2000 users in the company.

Organizations

Association for Computing Machinery (ACM@UVa) Sept 2017 – Present

- Represented University of Virginia in the International Collegiate Programming Contest (ICPC) for the Mid-Atlantic
- Attended weekly meetings to practice problem solving and algorithms using **Java** and **C++**.

Projects

HackUVA: face-normalizer [Overall 1st in Equality Hacks] March 2018

- Developed an artificial intelligence data preprocessing tool to combat racism/ageism/sexism in facial-recognition datasets; normalized user faces in real-time using the CLM **JavaScript** library to create racially ambiguous faces.
- Presented to both a panel of judges and company representatives including Google, SAP, Yext, and Capital One

Adversial examples in machine learning Oct. 2017 – Present

Undergraduate Research Assistant

- Edited the Zeroth Order Optimization (ZOO) attack algorithm using **Python** to implement an early-termination criterion based on a number of queries to reduce computational load.

Skills

- **Languages:** Python, Java, C++, JavaScript, R
- **Modules/Frameworks:** React.js, Elasticsearch, pandas, xgboost, sklearn, keras