Timothy X. Wang

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EDUCATION

University of Maryland, College Park **College Park, MD**

B.Sc. in Computer Science May 2020

GPA: 3.99 | QUEST Honors Program | ACES Honors College | Presidential Scholar | National Merit Finalist

SKILLS & COURSEWORK

Coursework: Database Design, Algorithms, Software Engineering, Machine Learning, Natural Language Processing, Data Science, Programming Languages, Data Structures, Computer Systems, OOP, Discrete Structures, Linear Algebra, Unix

Programming: Java, Python, SQL, Spark, C#, MapReduce, Apache Crunch, JavaScript, Hadoop, C, Unix

EXPERIENCE

Lyft | Software Engineering Intern

San Francisco, CA Aug– Nov 2019

- Implemented parallelized workflow to efficiently calculate driver ETAs, used throughout all of Lyft's core products, that reduced error by 20%
- Built distributed machine learning accuracy verification system to monitor and validate models used to learn surge price

Bloomberg L.P. | Software Engineering Intern

New York City, NY May – Aug 2019

- Engineered distributed PySpark featurization pipelines from scratch that process billions of financial security datapoints
- Developed and deployed scalable, online-learnable anomaly detection machine learning algorithms that help validate every financial security that flows through Bloomberg's daily financial systems
- Researched and implemented advanced sampling methods and unsupervised learning algorithms

Applied Predictive Technologies | Software Engineering Intern

Washington D.C. June – Aug 2018

- Implemented statistical calculations and model generation in SQL and C# that process over 40% of all credit card transactions in the world
- Developed clustering, hill-climbing, and genetic algorithms to generate control groups
- Leveraged React, Redux, Saga and C# to implement a more iterative workflow for creating statistical models

University of Maryland- Department of Computer Science | Teaching Assistant

College Park, MD Jan 2017 – Jan 2019

- Undergraduate TA for CMSC132 (Spring 2017): Advanced Java and Data Structures under Professor Tom Reinhardt where I led 2 recitations per week and multiple weekly office hours to reinforce concepts and introduce new material
- Undergraduate TA for CMSC351 (Spring, Fall 2018): Algorithms under Professor Evan Golub and Professor Clyde Kruskal

Sift Science | Software Engineering Intern

San Francisco, CA June – Aug 2017

- Implemented distributed and scalable Naïve Bayes text classification models in Java that process ~12TB of data
- Developed experimental Ensemble models used to analyze 150 million daily events and better detect online fraud
- Parallelized offline training pipeline with MapReduce that optimized feature extraction runtimes by 95%

RESEARCH

Dynamic Reconfiguration of Computer Systems to Minimize the Effect of Malware

College Park, MD Sept 2017 – Jan 2019

- Worked alongside Professor Jim Purtilo and other students to research self-learning, software defined networking
- Implemented machine learning systems to ingest signals from user traffic and packet data and predict malware

PROJECTS

Bipartisan (HopHacks @ Johns Hopkins University) Feb 2017

- A web application that combats misinformation by leveraging machine learning to filter credible news
- Created natural language processing pipeline to tokenize text and extract sentiment and entity analysis