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, Machine Learning, Natural Language Processing, Data Science, Programming Languages, Data Structures, Computer Systems, Object-Oriented Programming, Discrete Structures, Linear Algebra, Statistics, Unix

Programming: Java, Python, JavaScript, SQL, C#, C, Ruby, MapReduce, Apache Crunch, PySpark, Hadoop, Bash, Unix

EXPERIENCE

Applied Predictive Technologies | Software Engineering Intern

Washington D.C. June – Aug 2018

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

University of Maryland- Department of Computer Science | Teaching Assistant

College Park, MD Jan 2017 – Current

- Undergraduate TA for CMSC351: Algorithms under Professor Evan Golub and Professor Clyde Kruskal
- Undergraduate TA for CMSC132: 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
- Create and grade homework problem sets and exam questions

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 lowered feature extraction runtimes by 95%
- Engineered new machine learning features that characterized user transaction history and improved model performance

Cipher Systems | Software Development Intern

Annapolis, MD Dec 2016 – Feb 2017

- Developed NLP microservice in Java to semantically tag news articles using Stanford's CoreNLP library

ContentAnalytics | Software Engineering Intern

San Francisco, CA Oct 2016- Jan 2017

- Developed media comparison tool and internal API to improve E-Commerce for multiple Fortune 500 companies

RESEARCH

Dynamic Reconfiguration of Computer Systems to Minimize the Effect of Malware

College Park, MD Sept 2017 – Present

- 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

Method to the Madness (BigRedHacks @ Cornell University) Sept 2016

- Developed a Neural Network from scratch in Java that predicts March Madness collegiate basketball results