Timothy X. **Wang**

twang126@umd.edu in/timothyxwang timtim305.github.io 240.751.7188 timtim305

EDUCATION

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

B.Sc. in Computer Science & Mathematics May 2020

GPA: 4.0/4.0 | QUEST Honors Program | ACES Honors College | Presidential Scholar | National Merit Finalist

SKILLS & COURSEWORK

Coursework: Algorithms, Data Science, Programming Languages, Data Structures, Computer Systems, Object-Oriented Programming, Discrete Structures, Statistics, Unix

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

EXPERIENCE

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

University of Maryland- Department of Computer Science | Teaching Assistant

College Park, MD Jan – May 2017

- Undergraduate TA for CMSC132: Advanced Java and Data Structures
- Led 2 recitations per week and multiple weekly office hours to reinforce concepts and introduce new material

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
- Engineered data transfer architecture between Amazon S3 and Adobe's Scene7

RESEARCH

Dynamic Reconfiguration of 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

University of Maryland- Dept. of Computer Science | Summer Undergraduate Research Fellow

College Park, MD May – Oct 2016

- Researched and optimized Pollard's Rho factorization algorithm by approximately 1200%

PROJECTS

Supermodel Aug 2017– Current

- Web application that automates ML model selection using scikit-learn and GridSearch to generate hyper-tuned models

Ballmer's Peak Aug 2017– Current

- Built a web application using Flask and Sqlite3 to host a coding competition

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