Timothy X. Wang

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Education

University of Maryland, College Park- *GPA:* 4.0/4.0 — College Park, MD
Bachelor of Science in Computer Science & Mathematics — May 2020
Honors College | Advanced Cybersecurity Experience for Students (ACES) | Presidential Scholarship | National Merit Finalist

Skills

Java, Python, C#, C, C++, Windows, Linux, SQL, Bootstrap, JavaScript, HTML5, CSS, Matlab, Bash, MS SQL Server, Amazon Cloud

Experience

University of Maryland, College Park — College Park, MD
Undergraduate Teaching Assistant for CMSC132- Advanced Java and Data Structures — Jan 2017- Current
- Planned and led 2 recitations per week where I reinforced knowledge about advanced Java concepts and data structures
- Held office hours to address individual concerns from students

Cipher Systems — Annapolis, MD
Software Development Intern — Dec 2016 – Current
- Replicated and improved upon Natural Language Processing services provided by IBM's AlchemyAPI by developing a Java micro-service powered by Stanford University's CoreNLP library
- Developed tools to automate the complete data migration of Apache SOLR backend databases to the Amazon S3 cloud and redesigned entire software infrastructure to interface with Amazon cloud
- Optimized existing code base, integrated new code, performed Unit Tests, and attributed to the testing suite in C# via LINQ statements, event handling, and effective interface implementation and usage of ASP.NET's MVC model
- Updated data bindings using KnockoutJS and Bootstrap

Content Analytics Inc. — San Francisco, CA
Software Engineering Intern, Core Engineering Team — Oct 2016- Jan 2017
- Developed original image and video processing software alongside a REST-ful API backend to find correlations between online media queries and to measure and improve E-Commerce performances for multiple Fortune 500 companies
- Programmed and deployed a fleet of data-mining, robust internet web crawlers in Python
- Engineered a connecting technology between Amazon S3 and Adobe's Scene7 to enable future cloud computing services

University of Maryland, College Park — College Park, MD
Undergraduate Research Fellow, Departments of Computer Science and Math — May – Oct 2016
- Optimized Pollard's Rho algorithm's efficiency by approximately 1200% by implementing a unique exponentially growing cycle detection method, improving our polynomial pseudo-random number generator, and streamlining rate of comparisons
- Proved via Monte Carlo that our algorithm outperforms all other existing special-purpose algorithms for semi-primes < 2^{70}

Projects

Bipartisan — Feb 2017
- Bipartisan is a web application aimed to combat misinformation by leveraging Machine Learning to filter credible news
- Created an HTML web parser and Natural Language Processing pipeline to extract sentiment analysis, entities, and N-grams from news articles
- Wrote scripts to stream in thousands of news articles a minute

sagaciousAnalytics- A Machine Learning platform to help Engineer Smarter Promotions — Jan 2017- Present
- Created a Machine Learning platform in Python that uses facial emotion detection to analyze effectiveness of advertisements

Virtuoso- A Facebook Messenger Assistant — Dec 2016- Present
- Created an intelligent and personable chat bot using Python, Flask, MySQL and deployed via Heroku Cloud that can follow and learn complex commands
- Developed all modules used and created Natural Language Processing auxiliary using Microsoft's NLP API

Method to the Madness (Big Red // Hacks @ Cornell University) — Sep 2016
- Programmed a forward feeding Neural Network in Java that predicts collegiate basketball results in March Madness settings
- Extracted and interpreted statistics from an external database using Python data scraping and JavaFX

Clubs & Activities

Consult Your Community — College Park, MD
- Provide pro-bono consulting services to locally owned businesses and organizations as a Business Analyst and Consultant