Timothy X. Wang

✉ twang126@umd.edu in/timothyxwang 🌐 txwang.me 📞 240.751.7188 ⭕ timtim305 📧 @timtim305

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, Windows, Linux, SQL, Bootstrap, C++, JavaScript, HTML5, CSS, Matlab, Bash, MS SQL Server, AWS

Experience

University of Maryland, College Park   **College Park, MD**
Undergraduate Teaching Assistant for CMSC132- Advanced Java and Data Structures   Jan 2017- Current
• Lead 2 recitations per week where I reinforced concepts about advanced Java concepts and data structures
• Hold multiple office hours a week to address individual questions from students

Cipher Systems   **Annapolis, MD**
Software Development Intern   Dec 2016 – Current
• Developing Java microservice using Stanford's CoreNLP library to replicate and process IBM's AlchemyAPI's Natural Language Processing services
• Migrated Apache SOLR backend databases to Amazon S3 and updated software infrastructure to interface with Amazon S3
• Optimized existing code base and integrated new code in C#
• Performed front-end development with KnockoutJS and Bootstrap

ContentAnalytics Inc.   **San Francisco, CA**
Software Engineering Intern, Core Engineering Team   Oct 2016- Jan 2017
• Developed image and video processing software with a REST-ful API backend to find correlations between online media queries and measure and improve E-Commerce for multiple Fortune 500 companies
• Programmed and deployed a fleet of data-mining internet web crawlers in Python to extract images and links from websites
• Engineered a data transfer pipeline 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 an exponentially growing cycle detection method, improving our polynomial pseudo-random number generator, and streamlining rate of comparisons
• Proved via Monte Carlo analysis that our algorithm outperforms all other 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 application in Python that uses emotion detection to analyze effectiveness of advertisements

Virtuoso- A Facebook Messenger Assistant   **Dec 2016- Present**
• Created a 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 functionality alongside 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

Advanced Cybersecurity Experience for Students Competition Team   **College Park, MD**
• Apply offensive and defensive cybersecurity strategies in virtual Capture the Flag events and competitions