

Timothy X. Wang

Software Engineer | ✉ twang126@umd.edu in [in/timothyxwang](https://in.timothyxwang.com) 🌐 txwang.me ☎ 240.751.7188 📺 [tmtim305](https://www.youtube.com/channel/UCtmtim305) 📧 [@tmtim305](https://twitter.com/tmtim305)

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

sagaciousDeep- A Machine Learning platform to help Engineer Smarter Promotions

Jan 2017- Present

- Created sagaciousDeep, a platform built in Python that uses Machine Learning to analyze effectiveness of advertisements
- Developed a multi-layered Neural Network framework, the entire Machine Learning module, and data-mining scripts

Virtuoso- A Facebook Messenger Assistant

Dec 2016- Present

- Created an intelligent and personable chat bot using Python, Flask, MS SQL Server and deployed via Heroku Cloud that can follow and learn complex commands, navigate the Internet, and configure itself to an individual's tendencies
- 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

FibRetracements - A Fibonacci Approach to a Smarter Stock Market Analysis

Sep 2016

- Developed a recursive- based algorithm using dynamically queried market data to map and test unique Fibonacci time zones
- Implemented respective Fibonacci ratio percentages (38.2%, 50%, 61.8%) to predict support and resistance thresholds

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