

# 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| Presidential Scholar | National Merit Finalist

## Skills

Java, Python, C#, C, Windows, Linux, SQL, Bootstrap, C++, JavaScript, HTML, CSS, Matlab, Bash, MS SQLServer, 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 classroom concepts and introduced new material
- 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 customize IBM's AlchemyAPI's Natural Language Processing services
- Migrated Apache SOLR backend databases to AmazonS3 and updated software infrastructure to interface with AWS
- 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 using Flask to find correlations between online media queries and measure and improve E-Commerce for multiple Fortune 500 companies
- Programmed and deployed data-mining internet web crawlers in Python to extract images and links from webpages
- Engineered a data transfer pipeline between Amazon S3 and Adobe's Scene7 to facilitate future cloud 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 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 special-purpose algorithms for semi-primes  $< 2^{70}$

## Projects

**Bipartisan**

**Feb 2017**

- Bipartisan is a web application that combats 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 that utilized NewsAPI and Microsoft's Bing API to stream in thousands of news articles a minute

**sagaciousAnalytics- A Machine Learning platform to help Engineer Smarter Promotions**

**Jan 2017- Present**

- A Neural Network implemented 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 commands
- Developed Natural Language Processing functionality that supported Microsoft's Text Analysis API

**Method to the Madness (Big Red // Hacks @ Cornell University)**

**Sep 2016**

- Programmed a forward feeding Neural Network in Java that predicts March Madness collegiate basketball results
- 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 Spotluck, a restaurant technology start-up, as a Business Analyst and Consultant