Matthew Wong

mattwong77.info

(631) 740-0073
matw81@gmail.com

Education

University of Maryland, College Park

- Master of Science in Computer Science, ***GPA: 4.0***
- Bachelor of Science in Computer Science and Applied Mathematics, ***GPA: 3.84***
- Undergraduate Teaching Assistant- Advanced Data Structures (CMSC420), Computer Architecture (CMSC411), Introduction to Flight Systems (ENAE380), Organization of Programming Languages (CMSC330)

Experience

Asymmetrik Software Engineering Intern *Annapolis Junction, MD* June 2020 – August 2020

- Designed and created angular components and tests for cryptocurrency analysis tool
- Full-Stack Web Development using **Angular**, **Typescript**, **NodeJS**, **MongoDB**, and **Java**
- Created new **REST API** endpoints to reduce network calls and loading time of different application components
- Implemented and refactored mongo aggregation pipelines to speed up queries
- Configured Jenkins to automate the build and deployment of **Docker** images to AWS EC2 servers with the help of **Ansible** scripts

M&T Bank - Software Engineering Intern *Wilmington, DE* June 2019 – August 2019

- Wrote data-driven automated test scripts/business components using **XPath** query language, **Selenium**, and **TestNG** frameworks with Java language for the bank's money transfer system
- Wrote Database Verification scripts/business components using **JDBC API** and **SQL**
- Learned more about regression testing and design patterns

Projects

Nori Ray Tracer

- Used C++ to extend nori ray tracer base code to render images using Unidirectional Ray Tracing for diffuse and specular objects
- Implemented Bidirectional Ray Tracing algorithm which has faster convergence of Monte Carlo integral for final research project
- Learned more about **Monte Carlo Integration** and **Multiple Importance Sampling**

GoalKeeper

- Created a social media application where users can keep track of their goals using **Python**, **Flask**, **SQLAlchemy**, and **Docker**
- Incorporated a CI/CD pipeline with the project using **Gitlab runners** which handled the testing and deployment of the application to an AWS EC2 instance

MeeshQuest

- Created low level MapQuest in CMSC420 using Java and advanced data structures (i.e. **PR Quadtrees**, **PM Quadtrees**, **AVL-Trees**, **TreeMaps**); Implemented **Dijkstra and Prim's algorithms** for the map and functions to find nearest city/road
- Learned more about Object Oriented Programming and Design
- Earned **650/600 points** on the project

Skills

Languages

Proficient:
Java, C, Python, C++

Familiar:
JavaScript, Typescript, Ruby, Ocaml, HTML, CSS, Rust, SQL

Technologies

NumPy, Flask, Docker, Gitlab, Bash Shell, Selenium, SciPy, Pandas, Beautiful Soup, MongoDB, Jenkins, Ansible, RxJS

Accomplishments

- Dean's List (All Semesters)
- Received 1st Place Prize at UMD's iSchool Hackathon with Water Contamination Project