

WILLIAM MUELLER

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Education

UNIVERSITY OF VIRGINIA – Charlottesville, VA

Expected Graduation: May 2024

B.A. Computer Science:

Cumulative GPA: 3.88/4.00

Relevant Coursework:

Algorithms, Program & Data Representation, Discrete Mathematics, Software Dev Methods, Cybersecurity, Computer Architecture, Machine Learning, Cryptocurrency

Work Experience

SOFTWARE DEVELOPMENT CONSULTING INTERN – Pariveda Solutions, Chicago, IL

May 2023 - Aug 2023

- Developed and improved a data processing web-app to assist the Urban Wildlife Institute and 1000+ users
- Implemented two separate machine learning models in Python cloud functions to analyze and process wildlife recordings
- Created four new Node.js reporting functions so researchers can analyze processed data
- Orchestrated cloud functions using Google Cloud Workflows to streamline the data processing pipeline's operation
- Deployed, tested, and replicated SQL database locally for a better testing and development environment
- Designed SQL database changes to allow for recording equipment and types to be uploaded and used
- Minimized our client's costs by optimizing our cloud function's performance and memory
- Worked on an agile team with three other interns and two full-time developers in multiple two-week sprints
- Produced two new pages for the Angular front-end of the data processing app
- Prepared slides and gave presentations to the client to explain changes and demo new features

RESEARCH INTERN – UVA Biocomplexity Institute, Charlottesville, VA

June 2022 - May 2023

- Researched and engineered a TensorFlow based surrogate model for an SEI model
- Ran 100+ experiments on Rivanna, the University of Virginia's high-powered computer
- Performed regressions, correlations, and other statistical tests using python libraries like pandas and scikit-learn
- Generated spatial and temporal disaggregations of tomato flows based on various datasets
- Visualized results with python libraries such as seaborn, matplotlib, and geopandas
- Presented various findings to researchers and other interns in a symposium hosted by the Biocomplexity Institute

Organizations and Projects

CO-PRESIDENT, FORMER PRES. OF TECH – HooHacks, University of Virginia's Annual Hackathon

Sept 2020 – Present

- Managed event with over 600 participants while working with team of 40+ members and handling an \$80,000 budget
- Updated HackX, a Django-based registration and event management system for HooHacks 2023
- Enabled 1200+ users to register for our event, submit their projects, and receive normalized judging scores
- Led weekly executive board or general body meetings and planned social events for all members

STUDY BUDDY FINDER

Jan 2022 – Mar 2022

- Served as DevOps Manager on a team that created a fully functional Django app to help students find study buddies
- Performed biweekly sprints to model an Agile workflow with a team of 4 other students to gradually add features

CHESS VISUALIZATION TOOL

Dec 2020 – Jan 2021

- Designed and hosted a website which can be deployed as a tool to improve a chess player's visual memory
- Integrated JavaScript libraries such as chessboardjs and Bootstrap, and created a Firebase backend database

A* SEARCH ALGORITHM VISUALIZATION

Apr 2020 – Jun 2020

- Researched the A* search algorithm and replicated it in Java with a GUI while utilizing Java's SwingWorker class

DIRECTOR, ASSISTANT DIRECTOR, TEAM MEMBER – HackBI, Bishop Ireton's Annual Hackathon

Nov 2017 – Feb 2020

- Hosted a 24-hour event with 150 participants by leading a team of 25 members and over 30 adult volunteers while managing a \$10,000 budget and corresponding with the school administration and event sponsors

Skills

Programming:

Python, Java, C/C++

Web:

Django, HTML, CSS, JavaScript, Typescript, React, Angular, Node.js

Other:

Git, GitHub, Google Cloud Platform, MySQL, Firebase, Jira, Agile, Blender