

# WILLIAM MUELLER

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## Education

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**UNIVERSITY OF VIRGINIA** – Charlottesville, VA

**Expected Graduation: May 2024**

**B.A. Computer Science:**

Cumulative GPA: 3.90/4.00

**Relevant Coursework:**

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

## Work Experience

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**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

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

**Sept 2020 – present**

- Managed event with over 740 participants while working with a team of 40+ members and handling an \$80,000 budget
- Developed HackX, a React Native registration and event management system for HooHacks 2024
- Enabled 2000+ 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 and created a Firebase backend database

**DIRECTOR, ASSISTANT DIRECTOR** – 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

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### Programming:

Python, Java,  
C/C++

### Web Development

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

### Other:

Git, GitHub, Google Cloud Platform, MySQL, NoSQL, Firebase,  
React Native, Jira, Agile, Linux, TensorFlow, Pandas