Thomas Huitema

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EDUCATION

University of Maryland, College Park Aug. 2023 – May 2027
Bachelor of Science in Computer Science **4.0 GPA**

Relevant Courses: Object-Oriented Programming, Computer Systems, Discrete Structures, Organization of Programming Languages, Algorithms, Linear Algebra

TECHNICAL SKILLS

Languages: Python, Java, C, OCaml, JavaScript, HTML/CSS, AVR Assembly
Frameworks: Django, Flask, Bootstrap, JUnit
Developer Tools: AWS RDS, PostgreSQL, MySQL, Git, Linux, Digital Ocean, Postman, Atlassian Suite
Libraries: NumPy, Pandas, Matplotlib, BeautifulSoup, Raylib

EXPERIENCE

Student Software Engineer Sep. 2024 – Present
UMD App Development Club *College Park, MD*

- Building a mobile application for a non-profit to support veterans with long-term care, mental health services, and meals
- Leveraging Flask, React Native, PostgreSQL, and AWS RDS for development
- Designing a booking system with WebSockets and geolocation for appointment scheduling

Research Intern May 2024 – Aug. 2024
UMD Cooperative Institute for Satellite Earth System Studies (CISESS) *College Park, MD*

- Developed a machine learning model to predict global soil moisture at a frequency 6 times higher than existing models
- Designed efficient data processing workflow to clean and grid billions of satellite data points using Python
- Crafted an algorithm to merge 9 datasets used for model training
- Generated 50+ global maps for analyzing the model's spatial performance using Matplotlib

Technology Intern June 2022 – Sep. 2022
Federal Baseball League *Vienna, VA*

- Created web pages to display game results, league schedules, and team standings using PHP
- Developed a MySQL database for securely storing league data and game results previously managed in Excel
- Harnessed Atlassian Confluence for code documentation and feature planning

PROJECTS

TerpAlert | *Python, Django, PostgreSQL, JavaScript, Digital Ocean, Git* April 2024 – Present

- Built a web application for UMD students to receive email alerts when the dining halls have their favorite foods
- Developed an automated web scraper with BeautifulSoup to retrieve dining hall menus daily
- Created a dashboard for users to manage alerts for their favorite foods, with data stored in a PostgreSQL database
- Integrated Mailgun API for email verification and alert notifications
- Actively used by 275+ UMD students and featured in *The Diamondback* and Prince George's Community Television

Linear Algebra Library | *Python* Aug. 2024 – Present

- Implementing linear algebra algorithms learned in class to deepen understanding of the subject
- Developing functions for solving systems of equations and converting matrices to row-reduced echelon form

Snake Game | *C* July 2024

- Built the classic game with C to better grasp low-level programming concepts like dynamic memory allocation and threads

Handwriting Classifier | *Python, Tensorflow, Keras, NumPy, OpenCV, Matplotlib, Tkinter* Feb. 2021 – May 2021

- Developed a convolutional neural network model with Tensorflow and Keras to classify handwritten characters
- Achieved 99.4% classification accuracy with over 10,000 MNIST images
- Built a GUI with Tkinter and Matplotlib for live user handwriting classification