WESTON ARCHER TAYLOR

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EDUCATION

University of Alabama

Tuscaloosa, AL

M.S. Computer Science

January 2024 - May 2025

B.S. Computer Science, Minor in Mathematics, Concentration in Cybersecurity

August 2022 - May 2025

• GPA: 4.20/4.00

· Honors: National Merit Scholar, President's List, ACT 36, Senate Youth Scholar

• Relevant Courses: Data Structures & Algorithms, Software Engineering, Machine Learning, Software Security

Oregon State University

Corvallis, OR

Non-Degree Computer Science Focus

July 2023 - August 2023

University of British Columbia Non-Degree Computer Science Focus Vancouver, BC

May 2023 - July 2023

PROJECTS

CNN-based Pizza Identifier | Python, TensorFlow, S3, SageMaker

- Engineered a CNN-based Pizza Identifier using TensorFlow, capable of classifying images as "pizza" or "non-pizza"
- Utilized Amazon S3 to store and access the dataset, ensuring efficient data management during model training
- Implemented Amazon SageMaker for real-time model training, deployment, and API-based predictions
- Improved classifier accuracy by fine-tuning the CNN model, optimizing its performance with limited training data

University Course Scraper Bot | Python, Discord API, EC2, CodeDeploy, Git

- Developed a Python-based web scraper designed to strip complex data from a University course website
- Integrated the scraper into a Discord bot using the Discord API and made it responsive to user input
- Deployed the Discord bot on an AWS EC2 instance in order to create continuous operation
- Established an update supply chain by connecting the Git repository to EC2 using CodeDeploy

AWS-backed Email Gateway | Ruby on Rails, API Gateway, Lambda, SES

- Leveraged AWS Lambda to create a server-less environment, reducing operational costs
- Integrated a service trigger using a POST-only REST API via API Gateway
- Utilized Ruby on Rails to process information received through the API and prepare it for sending
- Established Amazon SES integration with Lambda, allowing for efficient delivery of the processed data

Investment Simulation App | Python, Qt6, MySQL, Alpha Vantage API, Git

- Crafted a portfolio simulator app using Python and the Qt6 framework, simulating real investments
- Implemented a MySQL database that kept track of user investments and data via an account system
- Incorporated a public API to provide real-time company price and information, enhancing market insights
- Employed multithreading for seamless real-time updates, enhancing user experience during active app usage

LEADERSHIP

UA CTF Cybersecurity Staff

- · Engineered challenges in various cybersecurity fields, empowering critical thinking among high school students
- Offered real-time support to virtual participants, enabling success in complex cybersecurity challenges

Alabama Robotics Competition Staff

- Efficiently coordinated logistics, enabling engaging student demonstrations with home-designed robots
- Impartially assessed each demonstration, providing valuable feedback to encourage student success in robotics

TECHNICAL SKILLS

Languages: C/C++, Python, SQL, JavaScript, Ruby, HTML, CSS, VHDL, MATLAB **Technologies**: AWS Cloud Platform, MySQL, Git, Qt, TensorFlow, RESTful API

CERTIFICATIONS