David Umanzor

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EDUCATION

University of Central Florida Jan. 2022 – May 2025

Bachelor of Science in Computer Science GPA: 3.3

Honors: National Science Foundation STRONG Scholarship

Certifications: AWS Academy Cloud Security Foundations, AWS Academy Cloud Foundations

EXPERIENCE

University of Central Florida | Lockheed Martin Sep. 2024 – Nov. 2024

Software Engineer Intern Orlando, FL

- Built a **C++** Unreal Engine plugin that integrates OpenAI's API for AI-generated behavior trees.
- Enabled **blackboard-to-JSON** conversion for AI-driven behavior tree refinement using environment data.

CAE USA Inc May 2023 – Aug. 2024

Machine Learning Engineer Co-Op Orlando, FL

- Collaborated in **Agile** team operations by participating in daily stand-ups, sprint planning, and retrospectives while leveraging **Jira** and **Confluence** for task tracking and documentation.
- Maintained over 80%-unit test coverage on new code; conducted peer code reviews to ensure code quality.
- Developed data processing and model training repositories to leverage **Sklearn**, **XGBoost**, and **LightGBM** for model creation.
- Created an automated hyperparameter tuning pipeline with **Ray Tune**, **Kubeflow**, and **Docker** optimizing selection time by 10%.
- Implemented 9 behaviors and subtrees in **Rust** / **XML** for autonomous agents in Computer Generated Forces simulations.
- Edited white papers detailing architecture and documentation for proposed uses of intelligent agents.
- Deployed **MinIO**, **Trino**, and **Iceberg** on **Kubernetes** with **Helm** charts for future development of a scalable analytics for CGF simulation data.
- Collaborated with a 3-person team to lay groundwork for expansion, including UI integration and data accessibility.

Florida Agricultural & Mechanical University Jun. 2021 – Dec. 2021

Undergraduate Research Intern Virtual

- Employed a Natural Language Processing model called **DistilBERT** to analyze a data set of spam and non-spam text reaching a Receiver Operating Characteristic (ROC) Curve of 98% True Positive Rate.
- Conducted using **Python** libraries of **sklearn**, **NumPy**, and **pandas** to preprocess data and train models.
- Developed a Convolutional Neural Network using **Keras** to identify ASL still images with 80% accuracy.
- Showcased findings at the 2022 Florida Undergraduate Regional Conference (FURC).

PROJECT

Project Mercury – *Backend Developer & Project Manager* Aug. 2024 – May. 2025

- Maintained a secure **EC2** instance using **OpenScap** verification for **97%** benchmark score.
- Migrated **AWS** email delivery from **Cognito** to **Amazon SES**, increasing throughput capacity from **50** to **50,000** emails per day.
- Handled bugs and maintenance in production **PostgreSQL** database via **PGadmin**.

Theta Tau Family Trees – *Solo Developer* Jan. 2025 – Apr. 2025

- Developed and deployed a mobile-responsive **Angular** web app on **Netlify** for managing and visualizing fraternity family trees.
- Integrated **Firebase** Authentication with a dynamic whitelist system to restrict access to authorized users.
- Organized a **Supabase** hosted relational database and utilizes **.NET 9** to interact with the database.
- Actively used by **20+** authenticated users, with infrastructure designed to scale securely and cost-effectively.

Bloomberg Tech Lab on Campus – *Fellow* Sep. 2024

- One of the 40 students selected to build an app with Bloomberg engineers using **RabbitMQ** and **Docker**.
- Used **Python** and **RabbitMQ** to develop a message queue system, enhancing real-time data communication.

SKILLS

Languages: Python, Java, Rust, PostgreSQL, CSS, HTML5, JavaScript, SQL

Frameworks: Bootstrap, Ionic, Express.js

Platforms: Node.js, Heroku, Firebase

Tools: Docker, Git, GitHub, Kubernetes, Postman, AWS