Adam Essaydi

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Education

University of Central Florida May 2026
Bachelor of Science in Computer Science *GPA: 3.85*

Relevant Coursework: Data Structures & Algorithms, Secure Software Engineering, Databases 1, Discrete Structures 2, Matrix Linear Algebra, Object Oriented Programming

Experience

Software Engineer CWEP June 2024-Present
Lockheed Martin *Orlando, FL*

- Support development and integration of an embedded sensor system supporting real-time pilot situational awareness using **C++** within a Linux environment.
- Optimize and validate code embedded applications through hardware testing, collaborating closely with embedded and DevOps teams.
- Engage in Agile workflows, including bi-weekly scrum meetings and peer code reviews.
- Leverage **Docker** and **Spack** to containerize build environments and streamline cross-platform development workflows.
- Mitigate security vulnerabilities via static analysis tools, improving memory safety and input sanitization.

Software Engineer Intern September 2023-Present
University of Central Florida *Orlando, FL*

- Contribute to the development of new features and functionalities, utilizing **PHP** to enhance user experience.
- Design and implement user-friendly interfaces, ensuring a cohesive and professional representation of the office's brand through **CSS** theming.
- Manage deployment of website using **WordPress**, ensuring optimal performance and security by regularly updating plugins and optimizing **HTML** code.
- Collaborate with team members to troubleshoot and debug issues, employing problem-solving skills to resolve technical challenges efficiently.

Projects

Optimal Collection of Pollution Data | *C++*

- Optimized the coverage of pollution data collection in the city by strategically choosing cost-effective data purchases.
- Conducted simulations of different neighborhoods, considering population density, income disparities, and size.
- Developed an algorithm which determined which phone sensor would provide best coverage within budget.
- Achieved a **39%** improvement over a random selection algorithm and a **29%** improvement over a pure greedy selection algorithm on a test of 100,000 different clusters.

Philanthropy Finder | *Python, Flask, HTML/CSS*

- Constructed a website using the **Flask** web framework, with the purpose of enabling users to discover charitable organizations near them.
- Programmed a search engine using location and category to display closest charities, utilizing the GeoPy library to handle GPS location to provide accurate distances.
- Implemented **Agile** practices and acted as Scrum master through weekly sprints to monitor progress.

MeowMatch | *MongoDB, ExpressJS, React, NodeJS, HTML/CSS*

- Engineered RESTful API endpoints in **Node.js** and **Express.js** to handle location-based search, cat posting, and adoption listing retrieval.
- Integrated the **PetFinder API** and built filters to show adoptable cats near the user in real time.
- Tested API routes with **Postman** and deployed the backend on **AWS Lightsail**, resolving MongoDB connection issues during setup.

Technical Skills

Languages: Java, Python, C, C++, Bash, HTML, CSS, PHP, SQL
Developer Tools: Git, Unity, Virtual Box, Docker, Podman, Postman
Libraries/Frameworks: OpenCV, Tensorflow, Flask, Numpy, Pandas, GeoPy, React, Matplotlib, SQLite, SQLAlchemy