

# JIM PAMPLONA

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## EDUCATION

Embry-Riddle Aeronautical University  
**Bachelor of Science in Software Engineering, Minor in Psychology**

Expected Graduation: **Spring 2025**

**GPA: 3.8/4.0**

Embry-Riddle Aeronautical University  
**Master of Science in Software Engineering, Accelerated Program**

Expected Graduation: **Spring 2026**

**Relevant coursework:** Data Structures & Algorithms, Software Construction, Software Requirements Engineering, Microprocessor Systems, Real-Time Embedded Systems, File & Database Systems, Software Team Project Senior Design

## PROJECT EXPERIENCE

### AI-Driven UAS Collision Avoidance System

Sept 2024 – Ongoing

*Scrum Master – 4-person Team, Senior Design Project*

- Testing unmanned aircraft systems (UAS) collision avoidance through creation of two-tiered simulation framework that utilizes JuliaSim for low-fidelity simulations and Gazebo & Ardupilot for high-fidelity simulations.
- Enhancing system interaction and testing efficiency by developing a front-end controller interface to integrate with Julia backend.
- Upon completion of simulation testing, system will be integrated into CrazyFlie UAS and Robot OS to enable real-world testing of collision avoidance strategies for autonomous unmanned aerial vehicles (UAVs).

### Society of Asian Scientists and Engineers Website

Aug 2023 – Ongoing

*Digital Relations Officer, Lead Developer*

- Rebuilding the organization's website, transitioning from the MERN stack to Next.js and TypeScript to better fit the static scope of the website.
- Implementing responsive design principles to ensure the website provides an optimal viewing experience across a wide range of devices, from desktops to smartphones, enhancing accessibility and usability for all users.

### JPfolio: A Personal Portfolio Website

July 2024 – Aug 2024

*Lead Developer – Personal Project*

- Developed a modern React personal portfolio utilizing Next.js, Tailwind CSS, and TypeScript, leveraging its route handling, type safety, and styling capabilities, and for an optimized and responsive user experience.
- Created an initial version to learn Next.js, followed by a refined version to apply the skills acquired and demonstrate improvements.

### Visionary: A Photography Portfolio Website

Jan 2024 – May 2024

*Lead Developer – 2-person Team, DBMS Project*

- Integrated MySQL into the MERN stack (replaced MongoDB to adhere to project requirements) to efficiently manage photography data.
- Designed wireframes using Figma, applying UI/UX principles with a focus on a responsive and smooth experience.
- Created a simple, modular, and visually consistent user interface utilizing the ChakraUI React design system library.

### FitSage: A Home Workout and Nutrition Application

Jan 2022 – Jun 2023

*Scrum Master, Lead developer – 4-person Team*

- Assisted assist users in their personal fitness goals without leaving their homes by developing a full-stack system (Java, SQLite, and Flutter Framework on Android) of an at-home fitness and nutrition app.
- Utilized Optical Character Recognition (OCR) to scan nutrition label data, enabling users to monitor calorie and macronutrient intake.
- Managed Agile/Scrum processes for effective project management and collaboration, ensuring timely delivery of the product.

## WORK EXPERIENCE

### IT Lab Assistant

Jan 2023 - Ongoing

*IT Services - Embry-Riddle Aeronautical University @ Daytona Beach*

- Offering support 20 hrs/week to students, faculty, and staff by conducting computer hardware/software maintenance and troubleshooting.
- Working closely with IT department to ensure readiness of computers and creating tickets whenever larger technological issues arise.

### IT Software Engineering Intern

May 2024 – Aug 2024

*GA Telesis, LLC*

- Solved critical issues that reduced downtime of systems by developed JavaScript scripts to troubleshoot and resolve software issues.
- Conducted research regarding optimization of aircraft parts sales AI-powered ERP integration and presented to company leadership.
- Leveraged Oracle PL/SQL to update databases in the Quantum Control ERP system and documented scripts used within GitHub library.
- Programmed HTML/CSS pages in the team's Oracle APEX application project that optimizes aerospace engineers and inspector's duties.

## SKILLS

### Languages & Frameworks:

Java, Python, C++, C, Dart, MATLAB, HTML/CSS, JavaScript, Node.js, Express.js, React, MySQL, SQLite, Next.js, Tailwind CSS, TypeScript

### Tools/Software:

GitHub, Jira, VS Code, JetBrains IDEs, Eclipse, Microsoft Office, CATIA, Figma, MATLAB, Gazebo, Vercel, Adobe Creative Cloud

### Concepts:

Agile/Scrum Methodologies, Git, Object-Oriented Programming, Assembly/Low-level programming, Microprocessor debugging/programming, Data Structures & Algorithms, Front-end development, Back-end development, Full-stack development, Graphic Design, Database, UI/UX

## LEADERSHIP

### Chapter President

May 2024 – Ongoing

*Society of Asian Scientists and Engineers @ ERAU-DB*

- Providing professional and social opportunities to the Asian students of ERAU by directing an executive board of 7 highly motivated students.
- Optimizing chapter operations by founding 2 new committees and delegating responsibilities to the leaders within our chapter.
- Leading an expansion of our chapter to offer members a Mentorship program, K-12 Outreach volunteering, and more professional development opportunities, fostering community growth as well as personal growth for our members.