JIM PAMPLONA

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Scan to view my website
www.jpamplona.com

EDUCATION

Embry-Riddle Aeronautical University — **Spring 2025**
Bachelor of Science in Software Engineering, Minor in Psychology — GPA: 3.8/4.0; *Magna Cum Laude*

Relevant coursework: Data Structures & Algorithms, Software Construction, Software Requirements Engineering*****, Microprocessor Systems, Real-Time Embedded Systems, Software Team Project Senior Design, Software Project Management*****, Software Quality Assurance*****, Human-Computer Interaction

* = Masters-level

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, Simulink, Gazebo, Vercel, Adobe Creative Cloud

Concepts:
Agile/Scrum Methodologies, Git, Object-Oriented Programming, Assembly/Low-level programming, Microprocessor debugging/programming, App development, Front-end development, Back-end development, Full-stack development, UI/UX design

WORK EXPERIENCE

Graduate Software Engineering Intern — **May 2025 – Aug 2025**
Honeywell Aerospace
- Utilized MATLAB Simulink Requirements toolbox to trace software requirements to artifacts (implementation, tests, etc.) within the system.
- Automated traceability tasks through the creation of a support tool to streamline requirement tracking and reduce human error in maintaining consistency across system documentation.

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.

PROJECT EXPERIENCE

Wayfinder: Autonomous Celestial Navigation for Deep Space Missions — **Jan 2025 – May 2025**
Project Manager – Graduate Software Project Management Research Project
- Explored a simulation-based study regarding AI-driven deep-space navigation using star recognition, with full project scope defined through probabilistic scheduling and cost modeling to determine project feasibility.
- Managed theoretical planning artifacts including WBS, Gantt charts, AON diagrams, and earned-value analyses to ensure informed decision-making and increases the likelihood of successful project execution.

Versatile Autonomous Navigation Testing and Guidance Environment — **Sept 2024 – May 2025**
Scrum Master – 4-person Team, Senior Design Project
- Tested 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.
- Enhanced system interaction and testing efficiency by developing a front-end controller interface to integrate with Julia backend.
- Developed system in alignment with software documentation, which was created based on system specifications elicited from the customer.

SkyTwin: A Digital Twin of the NAS for Air Traffic Operations — **Sept 2024 – Dec 2024**
UI Designer – 4-person Team, Graduate Requirements Engineering Project
- Designed a responsive prototype in Figma for a simulation dashboard supporting AI-based trajectory-based operations, real-time flight visualization, and conflict alerts for stakeholders of the system.
- Applied requirements elicitation techniques to support the development of system specifications, documentation, and prototype.
- Performed verification and validation practices to evaluate system completeness and ensure its alignment with stakeholder expectations.

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.

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.

LEADERSHIP

Chapter President — **May 2024 – May 2025**
Society of Asian Scientists and Engineers @ ERAU-DB

Peer Mentor — **Aug 2022 – May 2025**
Discover/First-Generation Students Association

Digital Relations Officer — **May 2023 – May 2024**
Society of Asian Scientists and Engineers @ ERAU-DB