

Rodolfo Gil Pereira

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EDUCATION

Bachelor of Science, Software Engineering Expected Grad May 2027
Schulich School of Engineering, University of Calgary

- Available May 1st, Seeking internship employment for 4-16 months

SKILLS

Languages: Python, Java, TypeScript, C, C++, gdb, Bash, MongoDB, MySQL, PostgreSQL
Frameworks & Developer Tools: Flask, ExpressJs, React, Vite, JUnit, Spring Boot, AWS, Docker, Linux, Postman, Git, Jira
Hardware: PIC, Arduino, Soldering, Breadboarding, MPLAB IDE

WORK EXPERIENCE

Developer & Research Assistant May 2025 - Present
SE-ALL Lab, Calgary, AB

- Created a natural language AI chatbot to support researchers in conducting systematic literature reviews, speeding up first search string generation by 100%
- Built fullstack application with a ReactJS frontend, a Python Flask backend, and MongoDB for data persistence
- Made continuous deployment pipeline using docker to simplify app deployment to AWS
- Implemented Retrieval-Augmented Generation (RAG) with a vector database, boosting LLM-generated content relevance and reliability for research tasks.
- Co-authored an academic paper submitted to the ASE 2025 conference

PROJECTS

Build Resumes Until Hired Web App | Python, AI, Docker, AWS January 2025 - April 2025

- Collaborated on a full-stack web app leverages AI to automate tailoring job seekers' cover letters and resumes, speeding up job application times by 200%
- Devised and implemented python web server and secure REST API for user authentication, including sign-up, login, document storage and more, with MongoDB for data storage
- Created a CI/CD pipeline for automated development and cloud deployment, utilizing Docker and AWS to ensure scalability and reliability

Movie Theater Application Server | Java, Spring Boot September 2024 - December 2024

- Collaborated in a team designing and developing a MySQL DB and Spring Boot server REST API for features movie info, user authentication, ticket booking, and payment
- Planned meetings, wrote technical and non-technical documentation throughout development life-cycle, culminating in project completion 1 week ahead of schedule

Disaster Victim Management Application | QA, Java January 2024 - April 2024

- Constructed Java app with PostgreSQL integration to aid disaster response, streamlining supply management and victim-family connections
- Implemented and tested application features using JUnit, ensuring software quality standards

Airline Flight Management App

November 2023 - December 2023

- Developed a robust flight management system in C++ to streamline operations, allowing users to efficiently search, book, and manage flights
- Optimized memory management, removing 100% of memory leaks and improving application performance

Mini Arcade Machine | C++, Circuit Design, Embedded Systems

November 2023 - December 2023

- Collaborated with a team to make a portable arcade machine powered by Arduino, integrating game in C++ called "Cuttle fish Run" to deliver an engaging gaming experience
- Optimized circuit layout and game algorithms, reducing projected power consumption by 20%

EXTRA-CURRICULARS

Backend & AI Integration developer**TechStart Club**, University of Calgary

Oct. 2025 - Present

- Developing backend architecture for a mobile app using ExpressJs designed to facilitate conversation and engagement at professional networking events
- Integrating AI-driven features such as personalized event activities and user matching algorithms to enhance social interaction.
- Contributing to feature planning, system design, and iterative testing to improve usability and reliability.

Website Developer**Paws United Rescue Society Club**, University of Calgary

January 2025 - Present

- Cooperated in a team in updating, maintaining, and expanding website UI using Webflow, enhancing UX
- Communicated with executives and team members to plan, design, and implement new website features