

Josean Ralat

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EDUCATION

University of Puerto Rico, Mayagüez (UPRM)

Bachelor of Science in Computer Engineering

Relevant Coursework: Data Structures, Algorithms, Advanced Programming, Computer Fundamentals

Mayagüez, Puerto Rico

Expected May 2027

Universidad Complutense de Madrid

Study Abroad Program

Madrid, Spain

Jan 2025–June 2025

EXPERIENCE

MiUni LLC

Programmer

Mayagüez, Puerto Rico

Aug 2025–Present

- Develop and maintain cross-platform mobile applications using Flutter and Firebase, focusing on backend data management and user interface performance
- Design and implement new features that improve user experience and integrate seamlessly with backend services

Embedded Systems Research Group

Research Member

Mayagüez, Puerto Rico

Aug 2025–Dec 2025

- Develop embedded and IoT systems in C/C++ to enhance Puerto Rico's smart grid infrastructure
- Conduct research and data analysis to advance efficient grid modernization technologies

LUMA Energy

Reliability Team Intern

San Sebastián, Puerto Rico

Jun 2025–Aug 2025

- Managed reliability metrics and automated reporting processes to improve operational efficiency
- Analyzed performance data to identify outage patterns and recommend grid reliability improvements

Draco | NASA Student Launch National Competition

Recovery Member

Mayagüez, Puerto Rico

Aug 2023–May 2024

- Designed, manufactured, and tested recovery systems to ensure safe payload retrieval
- Authored technical documentation reporting flight data and system performance metrics

PROJECTS

Personal Portfolio Website (React, Tailwind CSS)

- Built responsive user interface showcasing projects and professional experience
- Implemented modern UI/UX design patterns and deployed via Vercel for optimal performance

AI Chatbot Assistant (Python, FastAPI, Groq, Llama)

- Developed intelligent backend chatbot service using FastAPI and Groq API with Llama model
- Implemented structured data models with Pydantic for reliable API responses and smooth UI integration

Workout Logger App (Flutter, Firebase)

- Developed mobile app with Firebase Authentication and Firestore backend
- Implemented CRUD operations for workout management with BLoC state management and clean UI components

Expense Tracker (Python, Tkinter)

- Built GUI-based personal finance tracker with CSV data persistence
- Implemented category summaries, data visualization, and intuitive user interface features

Game Development Projects (C++, openFrameworks)

- **Asteroids Clone** – Implemented UI elements, gameplay mechanics including ship color changes and asteroid rotation
- **Aquarium Evolution** – Designed interactive ecosystem using OOP principles with collision detection and progressive levels
- **Tetris Clone** – Programmed piece mechanics, sound controls, adaptive difficulty, and ghost-piece visualization

TECHNICAL SKILLS

Languages: C++, Python, Dart/Flutter, C, JavaScript, HTML/CSS, Java

Frameworks/Libraries: React, Tailwind CSS, FastAPI, Firebase (backend), BLoC, pandas, NumPy, Matplotlib

Tools: Git, VS Code, Android Studio, Xcode, Vercel

Areas: Backend development, User Interface design, REST APIs, CAD Design, Microsoft Office