

Miggy G. Rivera

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Education

Jose Rizal University

Bachelor of Science in Information Technology

2024 - PRESENT

Experience

AWS Student Builder Group - JRU : Web Development Lead

01/21/2026 - PRESENT

- Lead a 10-person team developing a full-stack platform with JavaScript, FastAPI, PostgreSQL, Supabase, and Vercel.
- Built REST APIs and a three-stage registration workflow with Pydantic validation, database persistence, and automated email notifications.
- Integrated a Groq-powered Llama 3 chatbot with streaming responses, content guardrails, rate limiting, and caching.

AWS Student Builder Group - JRU : Vice President of External Affairs

04/01/2026 - PRESENT

- Lead partnership strategy, supervise the Relations Committee, and manage 5–10 external inquiries monthly.
- Secured two official partnerships and represent the organization at technology and industry events.

Notion Campus Leader

04/18/2026 - PRESENT

- Promote Notion adoption through campus workshops, reusable templates, and student productivity initiatives.
- Help students and organizations implement workflows for project management, documentation, and knowledge sharing.

Technical Skills

- **Languages:** Python, Java, JavaScript, TypeScript, SQL, HTML, CSS
- **Frameworks:** FastAPI, Flask, React, Next.js, Tailwind CSS, Pydantic
- **AI & Data:** RAG, LLM APIs, semantic and hybrid search, sentence-transformers, LlamaParse, Gemini, Vertex AI
- **Databases & Cloud:** PostgreSQL, Supabase, pgvector, SQLite, Docker, GitHub Actions, Vercel, Railway
- **Backend & DevOps:** REST APIs, JWT, rate limiting, Docker, GitHub Actions, Vercel, Railway, Linux

Projects

Rule VII — AI Architect | Python, FastAPI, Supabase (pgvector), LlamaParse

- Engineered a **RAG pipeline** that extracts and indexes regulatory documents, including the National Building Code, Fire Code, and BP 344.
- Built a **hybrid retrieval system** using sentence-transformers and pgvector to search architectural regulations through semantic and keyword matching.
- Designed PostgreSQL schemas and secured FastAPI endpoints with **JWT authentication and rate limiting**.

HYDRA: Flood Control Transparency System | Python, Flask, SQLite, Sentinel Hub

- Developed a **five-stage pipeline** to scrape, validate, geocode, enrich, and store public infrastructure project data.
- Built a **rule-based risk engine** that identifies anomalies using contractor history, timeline discrepancies, and project costs.
- Integrated BetterGov records with **Sentinel Hub satellite imagery** and designed a weighted model to classify project risk levels.ng.

AWS Student Builder Group Website | JavaScript, Python, FastAPI, PostgreSQL, Supabase, Groq API, Vercel

- Built and deployed AWS SBG-JRU's official portfolio website, showcasing its projects, events, departments, and technical initiatives.
- Replaced the **Google Forms-Sheets workflow** with a centralized Supabase registration system and automated email notifications.
- Developed an **admin dashboard** for reviewing applicants, updating registration statuses, and sending application emails.