

Marcus Cedric S. Pedrosa

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Education

Polytechnic University of the Philippines

Diploma in Computer Engineering Technology
Specializing in Machine Learning

Sta. Mesa, Manila
2023 - Present

Experience

Snapp Ventures Inc.

Software Quality Assurance Intern

Alabang, National Capital Region

March 2026 – May 2026

- Automated QA testing using Playwright by engineering parameterized JavaScript test scripts and containerizing the execution framework with Docker to eliminate repetitive manual workflows across a 10-week agile sprint cycle.
- Managed database infrastructure using Directus to architect SQL schemas and automate complex data workflows, achieving 100% data mapping accuracy across multi-source pipelines.
- Validated REST API endpoints and audited network payloads with Postman to isolate backend defects, successfully enforcing strict 400ms to 600ms page interactivity thresholds.
- Executed end-to-end functional and security testing on Android APK mobile builds and staging sites, capturing multi-modal layout overlaps and securing role-based UI access permissions.

Etiqa Life & General Assurance Philippines, Inc

Data Analyst Intern

Makati, National Capital Region

July 2025 – September 2025

- Executed comprehensive data cleaning and validation procedure using Microsoft Excel formulas to identify data duplicates and ensure high-quality data integrity.
- Optimized data management workflows by structuring and categorizing complex batch files, significantly improving data retrieval speeds and archival organization.

Leadership & Activities

Reserve Officer's Training Corps (PUP-ROTC)

Head Corps Escort

Sta. Mesa, Manila

November 2024 – June 2025

- Led the Corps of Sponsors and Escorts in organizing and executing ceremonial roles during the ROTC events and university functions.
- Orchestrated logistical coordination between military officers and university administrators to ensure seamless execution of high-profile protocols.
- Trained junior sponsors and escorts in protocols, proper conduct, and responsibilities, fostering a culture of discipline and leadership.

Projects

F1 2026 Winner Prediction System

- Engineered a predictive modeling pipeline using Python (Scikit-learn) to forecast F1 race winners, incorporating historical driver data, constructor performance, and real-time telemetry.
- Integrated a dynamic weightage system to account for the drastic 2026 technical regulation changes, shifting model reliance toward electrical powertrain efficiency and active aero adaptability.
- Scraped and processed large-scale motorsport datasets via the OpenF1 API, managing ETL pipelines to clean historical qualifying paces, pit stop times, and weather variables.
- Designed a robust PostgreSQL database architecture to store live telemetry trends, driver standings, and track-specific performance metrics for instant querying.

EcoBench

Title: A Sustainable Bench with Solar Charging and Manual Power Generation

- Built a battery health dashboard for a campus solar smart bench, tracking level, voltage, current, and remaining Ah with 5s live polling from an ESP32/FastAPI backend.
- Visualized battery level trends in Recharts (current/peak/low stats, 30-point rolling window) plus daily min-max range published at 5:00 PM.
- Shipped with React, Vite, Tailwind, Supabase, and Vercel; added weekly/monthly battery reports with CSV export and role-based admin access.

Budget Tracker Website

- Designed a personal finance management website using Python and PostgreSQL for secure data storage.
- Implemented complex SQL queries to generate spending reports and visualize budget constraints.
- Built a responsive React interface enabling seamless financial tracking and budget management across devices
- Deployed the application on a public server with real-time synchronization for multi-device access

Technical Skills

Frontend Development: HTML, Tailwind CSS, JavaScript, React

Backend & Database: Python, Java, NumPy, Pandas, PostgreSQL

DevOps & Infrastructure: Git/GitHub, Docker

Automation & Testing: Playwright, Maestro, Postman, Regression Testing

Certifications

Computer Systems Servicing NC II

TESDA - September 2024

Introduction to Python Programming

Coursera – November 2025

Mechatronics Servicing NC II

TESDA - February 2026

Python Data Associate

DataCamp – February 2026