

PAULO MENDOZA

COMPUTER ENGINEERING



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<https://abyza.github.io/>

EDUCATION

2021 - 2025

Technological Institute of the
Philippines – Quezon City

- Computer Engineering, elective in
Data Science

CAREER OBJECTIVE

Passionate about using my skills in programming, data science, AI, and engineering to help build innovative technologies. I strive to create groundbreaking solutions, from developing new systems and devices to exploring advanced applications of computing.

SKILLS

- Programming Languages: Python, C#, JavaScript, HTML, CSS
- Frameworks & Libraries: NumPy, Pandas, Scikit-learn, PyTorch, TensorFlow, Qiskit, LangChain, LangGraph, Selenium, YOLO, FastAPI
- Tools & Technologies: React Native, Node.js, Unity, Git, MySQL, Nginx, SAP, AWS, Docker, OpenAI
- Technical Skills: Multi-Agent Systems, RAG-based AI Chatbots, Computer Vision, Game Development, Digital Twin, IoT Systems, Deep Learning, Artificial Intelligence, Web Automation, Gen AI

PROJECTS

Princess Cruise Lines - A.I. Assistant

2025

Software Developer

- Built a multi-agent, multi-tool AI system using LangChain, LangGraph, and OpenAI, with text-to-speech and speech-to-text features
- Enabled reservation management (add/remove) and real-time tracking of OpenAI token usage and costs
- Developed a FastAPI backend and a React front-end, with the application hosted on AWS for scalability and performance.

AI Agent Creator

2025

Software Developer - Lightweight Solutions

- Built a multi-agent AI chatbot using Streamlit, LangChain, and LangGraph.
- Started with a locally hosted LLM, later integrated ChatGPT API for enhanced performance.
- Designed agents for document ingestion, RAG search, and contextual Q&A.

AlgSat

2024 - 2025

Researcher

- Developed a web app with a digital twin of Laguna Lake to visualize water quality and algal bloom coverage, in collaboration with the Laguna Lake Development Authority (LLDA), including an action plan with recommended responses.
- Used deep learning models trained on high-resolution satellite images for enhanced spatial and temporal resolution.

Exercise Posture AI App

2024

Researcher

- Built an Exercise Posture AI App in Unity with real-time pose detection using computer vision.
- Provided instant feedback for form correction to help users maintain proper exercise posture.

ACHIEVEMENTS

- Microsoft Imagine Cup PH 2023 –
3rd Place
- Adviser's Choice Award, CPE
Design Project Exhibit
- 4th Best Design Project, by
Program Chair, CPE Design Project
Exhibit

- References available upon request