TED PAULO A. FERANIL

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EDUCATION

Polytechnic University of the Philippines – Manila **Manila, PH**
Bachelor of Science in Computer Engineering Major in AI/ML 2022 – 2026
Thesis title: EarPrompt: A Real-Time Conversational AI Assistant for Enhancing Verbal Communication
Awards: Cum Laude, DOST Scholar (National Scholarship), Consistent President Lister (Top Academic Honor)

EXPERIENCE

Department of Science and Technology – PES - ITD **Manila, PH**
Programmer/Developer Intern July 2025 – September 2025
PHP | CSS | HTML | JavaScript | Laravel | Bootstrap | MySQL

- Built a full-stack internal stock management platform for DOST.
- Implemented 15+ database migrations, core CRUD operations for inventory management, and UI components, ensuring system stability through debugging and performance tuning alongside senior developers.

NTEK Systems Inc. **Manila, PH**
AI Software Developer Intern July 2024 – September 2024
Python | LangChain | FAISS | Flask | LLM Integration

- Engineered a Retrieval-Augmented Generation (RAG) pipeline linking LLM to documents, enabling real-time document querying and summarization across 20+ internal files.
- Created Flask-based backend APIs supporting the pipeline, improved query response time by ~70% (from ~8s to 2–3s) via iterative retrieval and optimized indexing.

PROJECTS

EarPrompt: Real-Time Conversational AI Assistant
Python | Flask | LLM Integration | Flutter | Firebase | Raspberry Pi 5

- Architected and led backend of a real-time voice AI pipeline, integrating Praat (voice analysis), SpeechBrain (speech recognition), and ElevenLabs for TTS; Flutter mobile app as the control interface.
- Ran the pipeline on Raspberry Pi 5, keeping end-to-end latency < 2 s; rated High (2.83/4) by speech pathologists.

SupportIQ (RAG-Based Company Support Chatbot) https://supportiq2026.vercel.app
Python | FastAPI | LangChain | Supabase | React | Tailwind

- Built a RAG support bot with hybrid semantic + keyword retrieval; benchmarked at 86% factual accuracy and 100% in-scope answer rate via a 30-case LLM-as-judge harness.
- Deployed a FastAPI + React app on Vercel + Render; cached AI-generated suggestions in Postgres, cutting load latency ~1.5s → <50ms.

Banana Ripeness Classifier (EfficientNetB0) https://bananaclassify2026.streamlit.app
Python | TensorFlow/Keras | EfficientNetB0 | Transfer Learning | Data Augmentation | Streamlit

- Fine-tuned an EfficientNetB0 model via two-phase transfer learning to classify banana ripeness across 4 classes (unripe, ripe, overripe, rotten), reaching 96.7% validation accuracy on a ~13K-image dataset.
- Built the augmentation pipeline (rotation, zoom, flip, brightness/shear) with Keras ImageDataGenerator and evaluated per-class results using a scikit-learn classification report and confusion matrix.

SKILLS & INTERESTS

Languages: Python, PHP, JavaScript, HTML, CSS
Frameworks & Libraries: Flask, FastAPI, Laravel, Bootstrap, Tailwind
AI & Data: RAG Pipeline, LLM Integration, Prompt Engineering, Vector Embeddings, Hugging Face, Scikit-learn, LangChain, PyTorch, Tensorflow
Databases: MySQL, Supabase, Firebase (Firestore), ChromaDB, FAISS
Tools & Practices: Git, GitHub, Postman, REST APIs, Agile, API Testing, Debugging, Test Case Design
Interests: Building AI-powered applications, AI agent systems