

# Darius Ardales

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## EXPERIENCE

### Data Science and AI Intern

Bank of the Philippine Islands (BPI)

May 2025 – Aug 2025

Makati, NCR, Philippines

- Deployed a prioritization model via Microsoft Copilot Studio, accelerating DS team's project selection by projected 40%
- Built a baseline audio-to-insights pipeline on GCP/Azure serving as foundation for unstructured audio data transformation

### Freelance AI Writing Evaluator and Trainer

Outlier

Aug 2024 – May 2025

San Francisco, CA, USA

- Provided human feedback for Meta's RLHF pipeline, evaluating 80+ Meta AI outputs weekly to boost response accuracy
- Ranked Senior Reviewer and inducted into Oracle top contributors group for consistent annotation quality

### Software Engineer Intern

Thinking Machines Data Science, Inc.

Jun 2024 – Aug 2024

Taguig, NCR, Philippines

- Led a project from design to presentation, managing stakeholders and delivering satisfied proposal outcomes
- Enhanced office space utilization and projected 60% cost reduction with a web app alternative to HotDesk

## AWARDS

### 1st Place Winner, BPI DATA Wave 2025: Hyper-Personalization & Customer Experience Track

Sep 2025

- Architected a proactive solution projected to slash cost-per-case by 31% and double the customer NPS growth
- Engineered an agentic tool using Google ADK and A2A for automated issue resolution and pre-analyzed agent reporting

### Winner, Maya Big 3 Startup Showdown

Apr 2025

- Developed an AI workflow and predictive models for cashflow/credit analysis with projected 100% loan decision speedup

## PUBLICATIONS

### Investigating the Generalization of Transformer Models for Time Series Forecasting in Sinusoidal Functions (Bachelor's Thesis)

Aug 2025

DLSU Dr. Andrew L. Tan Data Science Institute (ALTDSI)

- Achieved 87% lower MSE than Vanilla Transformer and outperformed Informer/Autoformer on unseen frequencies
- Developed Takens embedding and simplex projection methods, improving  $R^2$  from -1.26 to 0.72 on varied distributions

### SentiMetry: A Development of Emotional Wellness Web Application Using AI-Driven Sentiment Analysis

Nov 2024

Institute of Electrical and Electronics Engineers (IEEE)

- Combined EmoRoBERTa, Logistic Regression, and Bi-LSTM to predict top-3 emotions across 28 categories
- Generated personalized LLM feedback using Mistral API, with 81% of users finding it empathetic

### Towards a Memory-Efficient Filipino Sign Language Recognition Model for Low-Resource Devices

May 2024

Computing Society of the Philippines (CSP)

- Achieved 91% model-size reduction (11.7 MB to 1.0 MB) via post-quantization with only 6.25% accuracy drop
- Outperformed the accuracy of raw-frame CNN (by 74.51%) and LSTM (by 68.75%) by using MediaPipe landmarks

## EDUCATION

### De La Salle University

B.S. in Computer Science, Major in Software Technology, Minor in Data Science

Manila, NCR, Philippines

Aug 2020 – Aug 2025

## PROJECTS

### PageLeaper

Jun 2025 – Jul 2025

- Built a RAG system with Gemini embeddings processing 5+ PDFs/DOCX simultaneously with 20-chunk batch optimization

### Google Gen AI Intensive Course Capstone: Central Bank Compass AI

Mar 2025 – Apr 2025

- Engineered a multi-agent Agentic RAG system to distill central bank communications into actionable insights

### Towards a Safer Construction Environment: A Simple CNN for Safety Classification

Nov 2024 – Dec 2024

- Built an end-to-end safety classification pipeline with data augmentation (5x expansion), TTA, and FastAPI deployment

### Harvard Online: CS50's Introduction to Artificial Intelligence with Python

Apr 2024 – Jun 2024

- Gained robust theoretical and mathematical understanding of core AI algorithms from search to neural architectures

## TECHNICAL SKILLS

**Languages:** Python, SQL, JavaScript, TypeScript

**AI/ML:** Google ADK, LangChain, Hugging Face, PyTorch, TensorFlow, scikit-learn, OpenCV

**Data & Cloud:** PostgreSQL, ChromaDB, Pandas, NumPy, GCP, AWS, Azure, Docker, W&B

**Web & APIs:** Next.js, FastAPI, Streamlit, Vercel, Gemini API, OpenAI API, Mistral API