# Darius Ardales

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### EDUCATION

### De La Salle University

Manila, Philippines

Bachelor of Science in Computer Science,

 $Aug. \ 2020 - Aug. \ 2025$ 

Major in Software Technology, Minor in Data Science

### Experience

### Data Science and AI Intern

May 2025 – Aug 2025

Bank of the Philippine Islands (BPI)

Makati, NCR, Philippines

- Built an audio-to-insights pipeline on GCP/Azure, automating transcription, diarization, and analysis for consumer banking
- Deployed in production a prioritization model using Microsoft Copilot Studio to optimize the DS team's project selection
- Presented model recommendations weekly directly to the Head of Data Science, driving data-informed decisions

## Freelance AI Writing Evaluator and Trainer

Aug 2024 - May 2025

San Francisco, CA, USA

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

### Software Engineer Intern

Jun 2024 – Aug 2024

Thinking Machines Data Science, Inc.

Taguig, NCR, Philippines

- Led a project from design to presentation, taking full ownership of its development
- Enhanced office space utilization and projected 60% cost reduction with a web app alternative to HotDesk

### Research & 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<sup>2</sup> 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 3.5% accuracy drop
- Outperformed raw-frame CNN (25.5%) and LSTM (31.3%) by using MediaPipe landmarks

### 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

# Certificates & Awards

### Maya Big 3 Startup Showdown Winner

Apr 2025

• Developed an AI workflow and predictive models for cashflow/credit analysis, automating loan decisions for MFIs

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

Jun 2024

• Explored AI fundamentals from search algorithms to neural architectures (CNNs, RNNs, transformers)

### 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, Azure, Docker, W&B

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