# Darius Ardales

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### **EDUCATION**

# De La Salle University

Manila, Philippines

Bachelor of Science in Computer Science,

Major in Software Technology, Minor in Data Science

Aug. 2020 - Aug. 2025

#### EXPERIENCE

## AI Writing Evaluator and Trainer

Aug 2024 – Apr 2025

San Francisco, CA, USA

- Engineered prompts to challenge AI models and refine their reasoning and response quality
- Ranked and evaluated AI responses for RLHF models, providing feedback to improve performance

### Software Engineer Intern

Jun 2024 – Aug 2024

Thinking Machines Data Science, Inc.

Taquiq, NCR, Philippines

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

# RESEARCH & PUBLICATIONS

# Enhancing Transformer Models for Better Adaptation to Seasonal Shifts in Forecasting

Ongoing

DICUID: A. J.

DLSU Dr. Andrew L. Tan Data Science Institute

- Developed a simplex projection—inspired self-attention that outperformed state-of-the-art transformer models
- Ongoing bachelor's thesis with plans for further improvements to enhance adaptability to seasonal shifts

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

Nov 2024

Institute of Electrical and Electronics Engineers

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

# Towards a Memory-Efficient Filipino Sign Language Recognition Model

May 2024

# for Low-Resource Devices

Computing Society of the Philippines

- 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

### Central Bank Compass AI

Mar 2025 – Apr 2025

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

### SafetyCNN: a Simple CNN for Safety Classification

Nov  $2024 - Dec\ 2024$ 

• Designed a CNN for classifying construction images as "safe" or "unsafe" using PyTorch and OpenCV

#### Klima Insights

Mar 2024 – Apr 2024

• Implemented an application illustrating the impacts of global warming in the Philippines using GeoPandas

# Exploring Trends in Wholesale Goods Prices Per Region as Economic Indicators Nov 2023 – I

• Analyzed wholesale goods prices across regions in the Philippines using NumPy and Pandas

Nov 2023 – Dec 2023

Construction of Asserbag

# CERTIFICATES & AWARDS

Maya Big 3 Startup Showdown WinnerApr 2025DataCamp: Python Data AssociateSep 2024Harvard Online: CS50's Introduction to Artificial Intelligence with PythonJun 2024DataCamp: Data Analyst with PythonDec 2023

# TECHNICAL SKILLS

Languages: Python, JavaScript, TypeScript, SQL Databases: PostgreSQL, MySQL, Firebase, MongoDB

Machine Learning: scikit-learn, PyTorch, TensorFlow, Keras, Hugging Face, Gemini

Data Science: NumPy, Pandas, Matplotlib, Seaborn Web Development: React, Next.js, Tailwind, FastAPI Developer Tools: GitHub, Git, Jira, Jupyter, GCP