# 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

### Student Researcher

Jan 2024 – Present

Taquiq, NCR, Philippines

Dr. Andrew L. Tan Data Science Institute

- Explored Transformer-based models and self-attention mechanisms
- Researched Transformers for adapting to seasonal shifts in forecasting

# PROJECTS

# SafetyCNN: a Simple CNN for Safety Classification

Nov 2024 - Dec 2024

- Designed SafetyCNN for classifying construction images as "safe" or "unsafe"
- Achieved 93.55% training and 72.46% test recall with data augmentation and TTA

### Strategic Enhancement of Sephora's Recommendations

Jul 2024 - Aug 2024

• Developed recommender systems using content-based filtering, SVD, and logistic regression

### Klima Insights

Mar 2024 – Apr 2024

- Implemented an application illustrating the impacts of global warming in the Philippines using Plotly Dash
- Leveraged GeoPandas and Mapbox for interactive geospatial visualizations

# Sentimetry

Feb 2024 – Mar 2024

- Built models for emotion classification using TensorFlow, Keras, and scikit-learn
- Utilized HuggingFace transformers and deployed the backend through FastAPI and HuggingFace Spaces
- Paper accepted at IEEE International Conference on Future Machine Learning and Data Science (FMLDS 2024)

# Towards a Memory-Efficient FSL Recognition Model for Low-Resource Devices

Oct 2023 – Dec 2023

- Developed a Filipino Sign Language recognition model using TensorFlow and Keras
- Implemented gesture recognition with OpenCV, MediaPipe, and LSTM
- Paper accepted at the 24th Philippine Computing Science Congress (PCSC 2024)

# Exploring Trends in Wholesale Goods Prices Per Region as Economic Indicators

Nov 2023 - Dec 2023

- Analyzed wholesale goods prices across regions in the Philippines using NumPy and Pandas
- Conducted trend analysis using scikit-learn to uncover significant patterns

# Unveiling Urban Mobility Dynamics: Insights into Patterns and Trends of Divvy

Oct 2023 – Nov 2023

• Analyzed urban mobility patterns and conducted spatial trend analysis using scikit-learn

# CERTIFICATES

DataCamp

#### Python Data Associate

Sep 2024

Expires: Sep 2026

• Developed practical Python skills for effective data management and analysis

• Proficiently addressed common analytical questions through real-world scenarios

### CS50's Introduction to Artificial Intelligence with Python

Jun 2024

Harvard Online

- Delved into optimization, constraint satisfaction, and foundational machine learning
- Explored neural networks, including CNNs, RNNs, and transformers

# TECHNICAL SKILLS

Languages: Python, JavaScript, TypeScript, SQL Databases: Firebase, MongoDB, MySQL, PostgreSQL Data Science: NumPy, Pandas, Matplotlib, Seaborn, Plotly

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

Web Development: React, Next.js, Express, FastAPI

Developer Tools: GitHub, Git, Jira, Postman, Jupyter, Figma, GCP, Docker