

# Darius Ardales

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## EDUCATION

### De La Salle University

*Bachelor of Science in Computer Science,  
Major in Software Technology, Minor in Data Science*

Manila, Philippines

*Aug. 2020 – Aug. 2025*

## EXPERIENCE

### Student Researcher

*Dr. Andrew L. Tan Data Science Institute*

Jan 2024 – Present

*Taguig, NCR, Philippines*

- 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 the 24th Philippine Computing Science Congress (PCSC 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 IEEE International Conference on Future Machine Learning and Data Science (FMLDS 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

### Python Data Associate

*DataCamp*

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

*Harvard Online*

Jun 2024

- 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