

# 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 ways to enhance transformer efficiency
- Investigated methods to break memory bottlenecks while maintaining or improving accuracy

## PROJECTS

### Strategic Enhancement of Sephora's Recommendations

Jul 2024 – Aug 2024

- Developed recommender systems using content-based filtering, SVD, and logistic regression
- Achieved high-accuracy predictions for personalized product suggestions, improving customer experience

### 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

### Sentimentry

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

### 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

## PAPERS

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

*24th Philippine Computing Science Congress*

- Developed a Filipino Sign Language recognition using TensorFlow and Keras
- Implemented gesture recognition with OpenCV and MediaPipe

## CERTIFICATES

### 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:** Tensorflow, Keras, scikit-learn, PyTorch, Hugging Face

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

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