David Demitri Africa

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EDUCATION

University of Cambridge (Magdalene College)   October 2024 - June 2025
MPhil in Advanced Computer Science
- ❖ Jardine Cambridge Graduate Scholar, full scholarship + stipend from the Jardine Foundation. Graduated with Distinction.
- ❖ Thesis was on meta-learning in the pretraining of language models. Best MPhil Presentation, thesis graded 85%.
- ❖ Supervisor: Professor Paula J. Buttery, Richard Diehl-Martinez

Ateneo de Manila University   June 2023 - April 2024
M Data Science
- ❖ Merit scholar, neural networks, data mining, data visualization, pattern recognition, big data processing, advanced statistical methods, stochastic models, mathematical analysis, coding theory. GPA: 3.85
- ❖ Dissertation: *Neural Networks as a Measure of Complexity for Minimum Sorting Problems* under Dr. John Paul C. Vergara

Ateneo de Manila University   July 2019 - April 2023
BS Applied Mathematics
- ❖ Ateneo Freshman Merit Scholar, identified as part of the top 50 applicants, awarded a full tuition and fees grant for the duration of the course. Cum Laude. Received St. Ignatius Award for Most Outstanding Scholar. **Minor in Economics** and a **Minor in Urban and Regional Development**
- ❖ Thesis: *Lag and Duration of Leader-Follower Relationships in Mixed Traffic using Causal Inference* under Dr. Clark Kendrick C. Go

WORK EXPERIENCE

Research Scientist, **United Kingdom AI Security Institute**   *July 2025 - Present*
- ❖ Conducted research on consistency training and emergent misalignment
- ❖ Wrote learning theory section of research agenda. Evaluated grants and managed research teams

Reinforcement Learning Intern, **Asian Development Bank**   *June - Aug 2024*
- ❖ Explored possible applications of reinforcement learning models for internal transactions with the Office of the Auditor General
- ❖ Developed various models for dynamic liquidity management of the treasury as a proof-of-concept, presented to entire firm

Machine Learning Engineer Intern, **Thinking Machines Data Science**   *June - Aug 2023*
- ❖ Researched, conceptualized and tested evaluations on Langchain to benchmark state-of-the-art large language models
- ❖ Wrote pipelines to extract, transform, load documents for LLMs using RAG on Google Cloud Platform (GCP)

Program Assistant Intern, **Financial Futures Center**   *Apr - June 2023*
- ❖ Conducted financial analysis on development projects and grant applications, as well as contacted and coordinated with high-level finance ministers and senior officials all around the world
- ❖ Wrote research papers and briefers on climate-related projects and carbon markets based on consultation data

Summer Analyst, **J.P. Morgan Chase**   *Jun - Aug 2022*
- ❖ Conducted research using various statistical and machine learning techniques on currency, bond, and other security data to forecast medium-to-long term price action
- ❖ Planned, executed, and presented a case study to senior officials on financial opportunities emerging from rapid digitalization in the Philippines. Supported the trading desk in Manila writing daily reports and commentary on market-moving news

Economics Research Intern, **Philippine Competition Commission**   *Mar - Jun 2022*
- ❖ Conducted economic analysis on potentially anti-competitive mergers and abuses of dominance in local industry sectors
- ❖ Developed library in Python for competition policy analysis on datasets, wrote briefers on counterfactuals and the energy sector

Transfer Pricing Intern, **Deloitte**   *Jan - Mar 2022*
- ❖ Performed benchmarking analysis for international multi-billion dollar companies, wrote industry analysis updates, prepared transfer pricing documentation, and conducted functions, assets, and risk interviews with clients as a consultant
- ❖ Developed and presented a dashboard for consultant utilization and client tracking to the regional partner using an automated pipeline of PowerApps, PowerBI, and SQL

Engineering Intern, **Philippine Airlines Express**   *Oct - Dec 2021*
- ❖ Conceptualized, wrote, and maintained a scalable database for different contracts to be used in all departments of the company
- ❖ Built and implemented a system using PowerApps and PowerBI to automate different kinds of contracts for the firm.

Research Intern, **Department of Science and Technology - Advanced Science and Technology Institute**   *Jun - Aug 2021*
- ❖ Worked independently to build, test, and evaluate a customer relationship management system on Linux for the Bids and Awards Committee Secretariat, as well as migrate a legacy database of several hundred entries onto the new system using SQL

RECOGNITION

Debate
- ❖ President of the Ateneo Debate Society, 2022-2023
- ❖ World Champion (2023) and Grand Finals Chair (2024)
- ❖ 4x Asian Champion, Australasian Champion, 2x National Champion

Case Competitions
- ❖ National Winners, ASEAN-China-India Youth Leadership Summit 2023
- ❖ Runners-Up, ASEAN Data Science Explorers 2022

Papers
- ❖ **Africa, David Demitri,** Ronald Benjamin Dy Quiangco, and Clark Kendrick Go. "Lag and Duration of Leader–Follower Relationships in Mixed Traffic Using Causal Inference." *Chaos: An Interdisciplinary Journal of Nonlinear Science* 34, no. 1 (January 22, 2024): 013130. https://doi.org/10.1063/5.0166785.
- ❖ Montalan, Jann Railey, Jimson Paulo Layacan, **David Demitri Africa**, Richell Isaiah S. Flores, Michael T. Lopez II, Theresa Denise Magsajo, Anjanette Cayabyab, and William Chandra Tjhi. "Batayan: A Filipino NLP Benchmark for Evaluating Large Language Models." Proceedings of the 63rd Annual Meeting of the Association for Computational Linguistics, May 15, 2025. https://openreview.net/forum?id=RBwiqpYvOV.