

Maria Monica Manlises

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SUMMARY

Results-driven leader and research assistant with a keen interest in applying machine learning to human-computer interaction, and natural language processing fields. Pursuing opportunities to apply and enhance abilities in data science and machine learning through meaningful internships to contribute to cutting-edge research and development.

EDUCATION

De La Salle University, Manila (DLSU-M)

Expected Dec 2026

Bachelor of Science (Honors) in Computer Science and Master of Science in Computer Science

- Consistent First Honors Deans Lister, CGPA: 3.973/4.0 (Summa Cum Laude Standing)
- Recipient of the Archer Achiever Scholarship Grant

St. Stephen's High School (聖公會中學)

May 2021

Senior High School, Science, Technology, Engineering, and Mathematics (STEM Strand)

- First Honorable Mention, General Average: 98.99/100
 - Recipient of the Gokongwei Brothers Scholarship, Stephenian of the Year Award, Outstanding Leader Award
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RESEARCH EXPERIENCE

DLSU Dr. Andrew L. Tan Data Science Institute (ALTDSI)

May 2023 - present

Research Assistant with Dr. Macario Cordel II

A Prediction Model-based Decision Tool for Airline Fuel Consumption Management

- Performed exploratory data analysis and pre-processing on 70,000 flight data from a partner airline
 - Designed and executed MySQL database models for 15 aircraft types across 4 levels of granularity
 - Designed prediction models, with the single-step autoregressive model producing the highest R^2 value
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WORK EXPERIENCE

KonsultaMD

Oct 2022 - Jan 2023

Product Intern

- Produced graphs on 7,000 stores across the top 5 pharmacies in 13 regions towards competitor analysis
- Generated price comparison data points for 750 medicine products across 4 online pharmacies
- Designed customer journey maps and traits of 4 user personas toward UX and market research

Freelance

Sep 2022 - Dec 2023

Mathematics Tutor

- Taught algebraic concepts to high school students and synthesized 10 reviewers and session materials
 - Fostered students' appreciation for mathematics while ensuring a 100% passing rate
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LEADERSHIP EXPERIENCE

DLSU Association for Computing Machinery Chapter

Chair, AY '23-'24

Sep 2023 - present

- Supervised a team of 21 officers in the planning and execution of 15 applied computing activities
- Coordinated with an ACM Distinguished Speaker for a seminar on HCAI Systems garnering 245 attendees

Founding Vice Chair, AY '22-'23

Sep 2022 - Aug 2023

- Chartered a local chapter with 70 members to foster research interest in applied computing fields
- Executed the Open Lab Day to showcase the college's 10 research labs, drawing over 300 attendees

Peer Tutors Society

Executive Vice President, AY '23-'24

Sep 2023 - present

- Assisted the president in the management of 12 organization events and 4 committees

Vice President for Internal Affairs, AY '22-'23

Sep 2022 - Aug 2023

- Supervised website improvements to increase tutor-tutee matching rate from 94.61% to 98.51%
- Matched 335 tutor requests among an average of 30 tutors across 3 terms of an academic year

Tutor

Nov 2021 - present

- Taught 11 peers on subjects in discrete structures, programming, artificial intelligence, and mathematics

Associate Vice President for Academics September 2022 – present

- Spearheaded group studies in preparation for students' midterm and final exams
- Assembled reviewer distribution drives through Google Drive and GitHub Repositories

Project Head, Technology Summit 2023 December 2022 – present

- Led a team of 60 members across 6 committees, mainly in charge of programs and logistics
- Coordinated with 6 guest speakers for major forums, talks, and workshops that garnered 300 viewers

OTHER AFFILIATIONS

- *Co-Founder* - Modal AI Learning Bootcamp
- *Research Member* - DLSU Center for Language Technologies (CELT)
- *Student Member* - Association for Computing Machinery (ACM)
- *Member* - DLSU SPRINT (College of Computer Studies Honors Society)
- *Former Research and Academic Affairs Chairperson* - Computer Batch Government (CATCH2T25)

PROJECTS

Point n Move: Designing a Glove-Based Pointing Device

Created a wearable input prototype using an MPU6050 accelerometer-gyroscope sensor programmed with Arduino. Adjusted the threshold and sensitivity values across 2 iterations of user testing with participants aged 18-25. Achieved improved task completion times of 9 to 15 seconds, indicating high reliability and potential for future development.

Transaction Management in a Distributed Database Management System

Designed and implemented a web application interfacing with a distributed database handling medical appointment data across 3 cloud servers. Implemented master-slave node configuration and replication strategies to ensure global concurrency control and crash recovery. Achieved 100% successful outcomes during automated simulation testing.

Administrative Platform for an Early Childhood Education Training Program

As the Scrum Master, led a cross-functional team of nine through four consecutive two-week sprints, completing 100% of the Scrum points and 100% client satisfaction, facilitated by the effective utilization of Jira for sprint progress monitoring.

Spam and Ham Detection

Conducted a meticulous comparative analysis of Multinomial Naive Bayes and Logistic Regression algorithms for spam vs ham message detection, achieving F1 scores of 96.84% and 96.67%, respectively.

COMPETITIONS

- *1st Runner Up* - P&G NEXT Leadership Camp 2024 (*ERD construction, data population, PowerBI analysis*)
- *Top 25* - 2022 Shopee Ultimate Case Challenge (*ETA prediction improvement through machine learning*)
- *Top 200 / 2400 participants* - 2022 Shopee Coding League
- *Champion, 1st Runner-Up* - DLSU Clash of the Brains Programming Competition, Quiz Bee
- *Gold Award* - 2020 International Kangaroo Mathematics Competition
- *2nd Runner-Up* - 2019 Robolympix: Creative Competition
- *Bronze Award* - 2018 Bulgaria International Mathematics Competition Individual Contest
- *Champion* - 2018 Bulgaria International Mathematics Competition Team Contest

SKILLS

- C, C++, Python, Java, Go, SQL, Arduino, Prolog, HTML, CSS, Javascript, Verilog
- Pandas, Scikit-learn, NLTK, PyTorch, TensorFlow, Keras, SciPy, Matplotlib, MERN, PERL
- Figma, Canva, Adobe Creative Cloud, Notion, Jira, Microsoft Office, Google Suite
- English, Filipino, Chinese Fookien, and Chinese Mandarin

PUBLICATIONS

S. Dy*, R. Encinas*, D. Go*, K. Lasala *, **M. Manlises***, and J. Deja. Point n Move: Designing a Glove-Based Pointing Device. In preparation.

K. Lasala, D. Go, **M. Manlises**, and M. Cordel, II. From Hours to Days: Predicting Aircraft Fuel Consumption with Granularity. In preparation.