Ayan Lodovice Batulan

Computer Science • DOST Scholar

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CAREER OBJECTIVE

Aspiring Computer Scientist with a strong foundation in Machine Learning, Data Science, and Software Development, seeking to leverage analytical and programming skills to develop innovative solutions and contribute to impactful projects in a dynamic, growth-oriented organization.

EXPERIENCE

NAESS SHIPPING PHILIPPINES INC.

Full-Stack Developer

Manila, Malate February, 2025 - May, 2025

- Redesigned and modernized the company website using Next.js (JavaScript) and TailwindCSS, transitioning from a legacy site to a scalable and maintainable architecture.
- Integrated lightweight backend solutions using json-server to simulate REST APIs for internal development, demonstrating practical decision-making for limited-scope systems.
- Proactively identified and addressed organizational inefficiencies, proposing and implementing tools that enhance communication, reduce undocumented requests, and support long-term maintainability of IT operations.
- Developed a local ticketing system using the PERN stack (PostgreSQL, Express, React, Node.js), leveraging Sequelize ORM to streamline issue tracking and improve internal IT workflows and documentation.

DROPZONE COMPUTER SHOP

Cyber Cafe Assistant

Metro Manila, Marikina March, 2019 - January, 2022

- Gained practical experience in basic networking and system maintenance, building a foundation for advanced technical concepts.
- Optimized daily operations by monitoring computer systems and resolving hardware and software issues to ensure uninterrupted service.
- Managed inventory by processing stock levels and sales data, applying database management principles.
- Troubleshoot technical problems related to software, networking, and customer systems, honing diagnostic and problem-solving skills.

DESIGN PROJECTS COMPLETED / RESEARCH

Local Ticketing System (May, 2025)

A local issue-tracking web application built with the PERN stack (PostgreSQL, Express.js, React, Node.js) for NAESS Shipping Philippines Inc. Utilized Sequelize ORM for secure and maintainable data access, and implemented role-based workflows to support internal transparency and accountability.

Activity Recognition in Wi-Fi Sensing for Workout Detection Using an EfficientNetV2-Siamese Network with Attention Mechanism (May, 2025)

Activity recognition of workouts using the Wi-Fi OFDM signals for a non intrusive detection, with just a use of 2 ESP32 microcontrollers, the radiowaves signals are then studied by the machine learning model to identify which type of workout the user is performing.

New Naess Shipping Philippines Inc. Website (March, 2025)

A complete redesign and implementation of NAESS Shipping Philippines Inc.'s corporate website using Next.js and TailwindCSS. The project transitioned a legacy static site into a dynamic, SEO-optimized, and scalable web application with a modern developer-friendly stack. Incorporated simulated RESTful APIs via json-server for decoupled frontend-backend development and future extensibility.

Research Gap Finder (December, 2024)

A website tool to collect and analyze thesis libraries to identify research gaps and underexplored fields in various disciplines.

Inarawan Coffee Shop Branches (July, 2024)

Developed a Point-of-Sale and Inventory Management System for a coffee shop using ReactJS, TailwindCSS, Python, NodeJS, and PostgreSQL.

Algorithmic Abyss: Applying Procedural Algorithms for Dungeon Map Generation in Games (May, 2024)

Developed a Python-based Dungeon Crawler Game with random map generation using Drunkard's Walk, Binary Space Partitioning, and Cellular Automata algorithms.

Advanced Encryption Standard (AES) and Least Significant Bit (LSB) Steganography (May, 2024)

Developed a Python system that uses encryption techniques such as AES and LSB.

Comparative Assessment of Renewable Energy in the Philippines (April, 2024)

Conducted a simulation-based analysis comparing wind and solar energy resources for sustainable energy planning in the Philippines.

Lunti App: Junk Shop Recycling for Rewards (December, 2023)

Developed an app that promotes effective recycling by allowing users to earn points redeemable for goods at participating retailers and branches.

Algorithm Animation (November, 2023)

Developed ReactJS animation for Quick Sort, Binary Search and Merge sort algorithm with TailwindCSS

Library System with NLTK and Sentiment Analysis (November, 2023)

Designed a library system utilizing NLTK for sentiment analysis to improve user experience through feedback analysis

AGLZZ Computer Parts Shop (September, 2022)

Developed a Java-based inventory and point-of-sale system with CRUD functionality using MySQL as the backend.

Tea-amo (November, 2021)

Developed a C++ based inventory management and point-of-sale system with CRUD functionality.

SEMINARS ATTENDED

Artificial Intelligence from A-Z: Fundamentals of Data Science and Beyond (December 6, 2022)

Technological Institute of the Philippines

Cyber Security Buff: Defending Against SQL Injection and Brute Force Assaults (April 27, 2022)

Technological Institute of the Philippines

EXTRA AND CO-CURRICULAR ENGAGEMENTS AND VOLUNTEER WORKS

Department of Science and Technology (DOST)

Scholar

June 01, 2023 - Present

Association for Computing Machinery (ACM)

Member

October 01, 2023 - Present

Society of Scholars (SOS)

Member

August 01, 2024 - Present

Career Center (CC)

Member

August 01, 2025 - Present

Codecademy

Computer Science : 1,465 XP
Web Development : 1,210 XP
JavaScript : 790 XP
Python : 484 XP
Java : 290 XP

LeetCode

 Hard
 : 2

 Medium
 : 16

 Easy
 : 51

GitHub

Repositories : 20 Contributions (year) : 168

AWARDS AND ACCOMPLISHMENTS

VPAA'S LISTER

BS Computer Science First Semester, 2024 - 2025

DEAN'S LISTER

BS Computer Science First Semester, 2023 - 2024

DEAN'S LISTER

BS Computer Science Second Semester, 2023 - 2024

Department of Science and Technology (DOST) Scholar

BS Computer Science JLSS R.A. 7687, 2023

VPAA'S LISTER

BS Computer Science First Semester, 2022 - 2023

VPAA'S LISTER

BS Computer Science Second Semester, 2022 - 2023

DEAN'S LISTER

BS Computer Science Second Semester, 2021 - 2022

10th TOPCIT Philippines

Examinee Level 2 April, 2024

KNOWLEDGE AND SKILLS

Programming Languages: Python, Java, JavaScript, C++, and Dart

Frameworks: NextJS, React.js, TailwindCSS, and Flutter

Databases: MySQL, PostgreSQL, and MongoDB

Software Development: Experienced with Git, and proficient in developing efficient and scalable software solutions, combining technical

expertise with a focus on user experience and performance optimization.

Design Tools: Skilled in creating detailed flowcharts, process diagrams, and system designs using Lucidchart and Photoshop.

Collaboration: Strong leadership and teamwork abilities, fostering effective communication.

REFERENCE

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