

Alyanna Cabrera

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Education

De La Salle University

BS in Computer Science Major in Software Technology.

- **Magna Cum Laude** (CGPA: 3.736/4.000)

Manila, Philippines

June 2021 - August 2025

De La Salle University - Integrated School

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

Manila, Philippines

2019 - 2021

- Outstanding Paper Presentation
- Consistent Recipient of the Academic Excellence Award
- General Excellence Award - Silver Medallion

Experience

Private Retail Client

Manila, Philippines

Software Developer (Contract)

August 2024 – December 2025

- Built a **locally hosted inventory system** using **Node.js** and **EJS** based on on-site workflow audits.
- Designed a **reusable CSS component library** to ensure UI consistency and reduce future development time.
- Leveraged **jsPDF** to **automate invoice generation** with precise alignment for legacy printer stationery.
- Optimized UX via **responsive EJS templates** and **migrated legacy data** to a modernized database.
- Led **User Acceptance Testing (UAT)** and iterative feature refinements to align with business needs.

Abenson Ventures, Inc.

Manila, Philippines

System Development Intern

May 2024 – July 2024

- Developed **high-fidelity frontend prototypes** using **EJS** and **JS** to accelerate stakeholder approval.
- Engineered a **reusable component library** with **Vanilla CSS**, ensuring system-wide design consistency.
- Optimized **web responsiveness** via modern **CSS techniques** for seamless cross-device functionality.
- Conducted **competitive benchmarking** to identify and integrate high-impact features into the system.
- Standardized **QA processes** by implementing a **code review framework** to boost development efficiency.

Pearl S. Buck Foundation Philippines Inc.

Manila, Philippines

Full-Stack Developer

September 2023 – December 2023

- Translated business requirements into **high-fidelity prototypes**.
- Developed a **web-based Sponsor Record Management System** for centralized sponsor data access.
- Engineered a **responsive layout** to ensure platform accessibility across all device types.
- Collaborated in an **Agile/Scrum team** of 7, utilizing **sprint cycles** to ensure on-time delivery.

Technical Projects

ArchBot: University Knowledge Graph & Chatbot

Manila, Philippines

Software Developer

October 2024 – August 2025

- Built an inquiry chatbot using **Gemini 2.0 Flash** to automate complex university processes.
- Developed a **web-scraping pipeline** to transform unstructured newsletters into structured JSON.
- Architected a **Neo4j Knowledge Graph** with 19 entity/relationship types to map academic data.
- Implemented **Advanced RAG** with **multi-hop reasoning** to resolve multi-layered student queries.
- Enhanced accuracy via **multi-turn validation prompting**, enabling LLM self-correction logic.

AnimoHub: Distributed Fault-Tolerant Enrollment System

Manila, Philippines

Full-Stack Web Developer

September 2023 – December 2023

- Engineered a **distributed system** using **ASP.NET Core** across 4 nodes to eliminate single points of failure.
- Developed **3 isolated Microservices** (Auth, Course, Grade) each utilizing an independent **SQLite database**.
- Implemented **Service Isolation** ensuring the system remains operational during specific node outages.
- Integrated **cross-node API communication** and **JWT-based sessions** to maintain state across services.
- Designed a **"Fail-Fast" detection logic** to identify downtime and prevent cascading errors during enrollment.

Lasallian's Food to Pick

Manila, Philippines

Full-Stack Web Developer

May 2023 – August 2023

- Deployed a **Node.js** discovery platform to streamline culinary searches within the DLSU area.
- Designed an **intuitive UI/UX** using **HTML/CSS** with **categorized search and filter** features.
- Built a **responsive interface** to ensure seamless **mobile accessibility** for students on the go.
- Managed a **MongoDB database** to store and retrieve structured restaurant and menu metadata.

Leadership & Activities

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

Manila, Philippines

Research Member

October 2024 – December 2024

- Published research in **Springer's LNNS series** for the **NLPIR 2025** conference (Scopus indexed).
- Studied **LLM and Knowledge Graph (KG)** synergy to reduce hallucinations in **QA systems**.
- Built an **end-to-end KGQA pipeline** involving KG construction and automated data collection.
- Curated a specialized dataset via **stratified random sampling** of official university communications.
- Achieved **93.14% accuracy** in node generation during **information extraction** and **graph creation** phase.
- Validated system with 567 facts, yielding a **93.52% F1 score** and a **94.86% Recall rate**.

DLSU - Microsoft Student Community (DLSU - MSC)

Manila, Philippines

Executive of External Relations

December 2021 – September 2024

- Cultivated a **strategic network** of AI researchers and tech leads for Generative AI sessions.
- Built an **expert database** through targeted research to secure speakers for **technical events**.

University Student Government - Office of the Vice President (USG - OVPIA)

Manila, Philippines

Executive of Finance

February 2023 – January 2024

- Managed **end-to-end financial administration** and budget tracking for **university projects**.
- Optimized **procurement and liquidation processes** in strict compliance with **auditing standards**.

Skills & Interests

Technical: C, C++, C#, Java, Python, HTML, CSS, Tailwind, JavaScript, React, Node.js, Next.js, MongoDB, SQL, x86-64 Assembly

Language: English (Fluent), Filipino (Native), Hokkien (Basic), Mandarin (Basic)

Tools: Microsoft Office, Figma, Canva, Git

Interests: Badminton, Swimming, Watching K-Dramas