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EDUCATION

BSMS Computer Science | De La Salle University, Manila, Philippines

2022 - Present

- Consistent Dean's Lister | CGPA: 3.5 / 4.0
- Relevant Coursework: Large Language Models, Machine Learning, Affective Computing and Multimodal Interactions, Design and Analysis of Algorithms, Advanced Software Engineering, Advanced Database Systems, Statistical Modeling and Simulation

EXPERIENCE

VISON Technologies Corporation

Aug. 2025 - Dec. 2025

Intern / Computer Vision Module Developer

- Optimized License Plate Recognition (LPR) modules by implementing Python, OpenCV, and OCR technologies, resulting in an 80% increase in character detection accuracy and confidence scores.
- Engineered robust image preprocessing pipelines to mitigate environmental noise and lighting variability, significantly improving OCR reliability for vehicle capture.

TE3D House | De La Salle University

Nov. 2024 - Present

Researcher / Technology, Education, Entertainment, Empathy, Design (TE3D) House

- Developed an emotion recognition pipeline that achieved 89% accuracy on the DAiSEE dataset using ensemble learning techniques.
- Processed and labeled over 9,000 frames of video data to train a multi-modal affective computing model.

Philippine Computing Science Congress | Computing Society of the Philippines

2025

Graduate Student Assistant / PCSC 2025 Conference Proceedings

- Systematized the compilation and formatting of 55+ accepted research papers using LaTeX, ensuring 100% adherence to rigorous academic publishing standards and metadata consistency.
- Facilitated technical review workflows in collaboration with CSP board members to resolve document compilation errors and finalize manuscripts for publication.

LEADERSHIP EXPERIENCE

Society of Proactive Role Models INspiring Total Development | De La Salle University

Aug. 2024 - Present

Associate Vice President / Creatives Committee

- Collaborated with the Executive Board to translate organizational goals into actionable creative strategies, ensuring brand alignment across all platforms.
- Managed multiple high-pressure deadlines concurrently, maintaining high-quality output while navigating shifting organizational priorities.

SERVIR under the Office of the Associate Dean in Academics | De La Salle University

Oct. 2023 - Present

Student Volunteer / Head - Creatives and Communications Committee

- Spearheaded the marketing and communications for AMPLIFY, a flagship youth symposium on SDGs, successfully attracting 150+ delegates from various universities.
- Leads and mentors a high-performing creatives team, delegating tasks for 10+ annual research and academic events while fostering a collaborative environment for growth.
- Orchestrated large-scale event logistics in coordination with the Office of the Associate Dean, streamlining student enlistment processes and academic event promotion.

Student Discipline Formation Unit Paragons | De La Salle University

Oct. 2023 - Present

Student Volunteer / Executive - Creatives Committee

- Project Managed the organization's participation in multiple Advocacy Runs, coordinating cross-functionally with three external committees to mobilize 50+ participants.
- Elevated the organization's social media presence, driving a 50% increase in social media reach through targeted informational campaigns.
- Managed the design and dissemination of publication materials for the "Juan Tapat Honesty Store," translating monthly honesty ratings into visual reports to promote a culture of integrity and accountability within the campus.

Computer Studies Government | De La Salle University

Jul. 2023 - Jul. 2024

Student Volunteer / Executive - Integrated Marketing Communications

- Managed the communication pipeline for the entire CCS student body, delivering critical updates and event information to 1,000+ students.
- Collaborated with student leaders to produce high-quality visual assets that maintained a unified and professional voice for the Computer Studies Government.

PROJECTS

English-Filipino Translation Evaluation via Agentic LLM-as-a-Judge (Natural Language Processing)

- Developed and compared a structured Prompt-Engineered Judge and a multi-step Agentic Judge using a fine-tuned LLaMA-3-8B (4-bit quantized) model.
- Engineered a modular agentic framework featuring a short-term memory store and specialized linguistic tools, including an Idiom Checker and Word Connotation Checker.
- Conducted comparative analysis using Spearman's rank correlation, finding that agentic workflows provide superior qualitative explainability and pragmatic error detection

Distributed Web Scraper for Link Extraction (Distributed Systems)

- Engineered a high-performance Master-Worker distributed architecture using Pyro5 RMI to facilitate Remote Method Invocation across multiple nodes.
- Overcame the Python Global Interpreter Lock (GIL) by implementing true process-level concurrency, achieving a throughput of 3,951 pages in 10 minutes.

Recallify: Spaced-Repetition Learning Platform (Technical Lead & Architect)

- Architected the end-to-end system logic, implementing a custom Spaced-Repetition System (SRS) algorithm to optimize memory retention.
- Led technical mentorship for the development team, conducting code reviews to standardize implementation and ensure architectural integrity.
- Established the project's DevOps infrastructure, including a Git-based CI/CD pipeline and Jest testing suite to ensure high-performance deployment.

Kiku: Primed Listening (Browser Extension & Language Learning Tool)

- Developed and published an open-source Chrome extension for YouTube and Netflix that automates "Primed Listening" by programmatically pausing playback after dialogue.
- Engineered real-time subtitle detection and playback control logic to facilitate language immersion, maintaining a 5-star rating on the Chrome Web Store.
- Implemented a privacy-focused, local-only architecture with customizable hotkeys and dynamic UI elements to optimize user learning workflows.

Distributed Transactional System for Steam Game Analytics

- Developed a three-node distributed database system to manage large-scale Steam transaction data, implementing ETL pipelines for data cleaning and warehouse aggregation.
- Engineered system-wide reliability through data replication, concurrency control, and crash recovery protocols to ensure high availability and ACID compliance.
- Optimized query performance by developing a web-based interface with platform-based data partitioning, facilitating efficient cross-node data access and management.

PAPERS

Sityar, L. A., & Azcarraga, J. (2026). *When More is Less: A Sensitivity Analysis of Geometric Landmarks, Facial Action Units, and Label Binarization for Affective State Recognition*.

- To be presented at the 21st International Conference on Persuasive Technology (PERSUASIVE 2026), Hakodate, Japan.

Sityar, L. A., & Guillermo, J. (2025). *Design and Comparison of Agentic and Prompt-Engineered LLM Judges for English-Filipino Translation Evaluation*. De La Salle University.

Sityar, L. A., & Carandang, M. R. (2025). *Design and Implementation of a Distributed Web Scraper for Link Extraction*. De La Salle University.

Sityar, L. A., Alvarez, Y. E., Nuñez, J. C., & Villaver, R. M. (2024). *Predicting Emotions based on Text Input*. De La Salle University.

Sityar, L. A., Garganera, A. J., Carandang, M. R., & Nograles, N. R. (2024). *Transaction Management on Steam Game Data: A Distributed Database Approach*. De La Salle University.

Sityar, L. A., Garganera, A. J., & del Rosario, J. J. (2024). *Case Study on Multi-Tape Turing Machines*. De La Salle University.

TECHNICAL SKILLS & INTERESTS

Languages: English, Filipino, Japanese (Intermediate)

Technical: Python, Java, SQL, JavaScript, C, C++, Prolog, Go, Git

Machine Learning Technologies: LLMs, Agentic Frameworks, RAG, Prompt Engineering, Sentiment Analysis, SMOTE

Platforms: Google Colab, Anaconda, Github, Visual Studio Code, Hugging Face, Proxmox, Figma, Adobe Illustrator

Interests: AI Engineering, Computer Vision, Affective Computing, Language Learning, Graphic Design, Boxing, Running