

# SITYAR, LESTER ANTHONY JR. H.

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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

*Intern / Computer Vision Module Developer*

Aug. 2025 - Dec. 2025

- 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

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

Nov. 2024 - Present

- 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

*Graduate Student Assistant / PCSC 2025 Conference Proceedings*

2025

- 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

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### 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

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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

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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