

CARL EUGENE S. HARADJI

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[Website](#) | [GitHub](#) | [LinkedIn](#)

EDUCATION

PAMPANGA STATE UNIVERSITY

Pampanga, Philippines

Bachelor of Science in Computer Engineering

September 2026

Cum Laude | General Weighted Average (GWA): 1.508

Relevant Coursework: Software Engineering, Data Structures and Algorithms, Database Systems, Artificial Intelligence, Machine Learning, Web Development, Embedded Systems, and Computer Networks

WORK EXPERIENCE

AI & ML RESEARCH CENTER, PAMPANGA STATE UNIVERSITY

Pampanga, Philippines

Student Intern

Feb 2026 - May 2026

- Consolidated project data from multiple university departments and contributed to the interface of a prototype repository for theses, dissertations, and capstone projects.
- Co-wrote concept papers and project proposals for Department of Science and Technology (DOST) review, covering objectives, technical approaches, and development plans.
- Researched requirements and technical feasibility for proposed research and development projects.
- Prepared MATLAB licensing guidelines and helped activate and configure licenses on assigned workstations.

PROJECTS

GREGGSPEAK: VISION-BASED TRANSLATOR AND READER FOR GREGG SHORTHAND

Software Development Lead, Team Thesis

Nov 2025–May 2026

Python, OpenCV, TensorFlow Lite, MobileNetV2, Flask, SQLite, Raspberry Pi, ESP32

- Led software development and integration of a system that converts handwritten Gregg shorthand into editable text, audio, and draft court transcripts.
- Integrated image preprocessing, line and word segmentation, MobileNetV2 recognition, language refinement, and text-to-speech.
- Contributed to the preparation and validation of a 1,480-class Gregg shorthand dataset containing more than 74,000 images.
- Developed the Flask and SQLite workspace for reviewing scanned pages, correcting recognition output, managing saved transcripts, and exporting PDF and editable Word documents.
- Integrated the recognition workflow with Raspberry Pi camera capture and a document-feeder prototype.
- In a timed evaluation at MTC Sta. Rita, reduced transcription time for one shorthand page from 7 minutes 39 seconds manually to 3 minutes 13 seconds with GreggSpeak—a 57.95% reduction.
- Received a 90.74% overall stenographer-user evaluation across functionality, usability, reliability, and maintainability, interpreted as Strongly Agree on a five-point Likert scale.

GYM MANAGEMENT SYSTEM

Full Stack Project, August 2026

React, TypeScript, Node.js, SQLite, REST API, Vite

- Built a full-stack application with searchable member profiles, membership renewals, historical records, and automatic expiration tracking.
- Implemented manual attendance and prototyped NFC card check-in using NTAG215 cards, with membership validation, duplicate prevention, and persistent SQLite records.
- Developed dashboards and reports showing attendance trends, peak check-in hours, expiring memberships, and member activity.
- Integrated an optional LLM assistant that answers operational questions through controlled, read-only backend functions without executing model-generated SQL.

AWARDS

- Best Thesis in Computer Engineering — Pampanga State University
- Best Computer Engineering Design Award — GreggSpeak, June 2026
- Best Research Paper — 8th College of Engineering and Architecture Research Colloquium, July 2026
- Second Best Presenter in Computer Engineering — June 2026

TECHNICAL SKILLS

Programming: Python | TypeScript | JavaScript | SQL | C/C++

Frontend and 3D Web: React | Astro | Three.js | HTML | CSS | Vite

Backend and Data: Node.js | Flask | REST APIs | SQLite | Firebase

AI and Computer Vision: OpenCV | TensorFlow/Keras | TensorFlow Lite | PyTorch | YOLOv5 | LLM Integration

Embedded Systems: Raspberry Pi | ESP32 | Arduino

Tools: Git | GitHub | VS Code | Postman | Vercel

Additional Technologies: Flutter | Dart | Android Studio | Figma | Fusion 360 | KiCad | AutoCAD

Spoken Languages: English | Filipino