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EDUCATION

University of the City of Manila (*Pamantasan ng Lungsod ng Maynila*)

Bachelor of Science in Computer Science | Dean's Lister (6x)

Manila, PH

Ongoing

EXPERIENCE

Sun Life Global Solutions

IT Intern

Taguig City, PH

June 2026 - July 2026

- Built a **local RAG-based AI chatbot** using **Ollama** for the IT department, leveraging an internal knowledge base and integrating **Whisper** for **voice-based** interaction and kiosk deployment.
- Set up and configured company laptops and desktops using company system images

BlastAsia, Inc.

Frontend Developer Intern

Pasig City, PH

June 2024 - July 2024

- Delivered front-end features for **3 enterprise-grade projects**, translating designs into high-performance, user-friendly interfaces using modern web practices
- Collaborated with cross-functional developers to implement modular UI components, improving development efficiency and team productivity
- Diagnosed and resolved performance, responsiveness, and accessibility issues, ensuring high-quality software delivery

Google Developer Groups on Campus PLM

Web Development Lead

Manila City, PH

Aug 2025 - Present

- Led multiple end-to-end web projects, building scalable platforms and implementing new features
- Mentored beginner developers and improved team collaboration, enhancing project delivery and developer skill growth

Zuitt Coding Bootcamp

Frontend Developer Trainee

Quezon City, PH

Oct 2022 - April 2023

- Completed a **6-month, 100+ hour front-end development training** during senior high school work immersion, mastering HTML, CSS, Bootstrap, JavaScript, and Git

FEATURED PROJECT

Prep PH | *College Entrance Exam Platform*

Live: prepPH

Tech Stack: *Next.js, TypeScript, NoSQL, PayMongo, NextAuth, Material UI*

- Built and scaled a full-stack college entrance exam **SaaS platform** used by **8,000+ users** with **1,000+ registered accounts**
- Integrated **PayMongo as the payment gateway** to process subscription and one-time payments, enabling platform monetization
- Implemented **secure authentication** using **NextAuth** with Google **OAuth**, **JWT**-based sessions, and **email** verification
- Built a custom **SM-2**-inspired **spaced repetition** engine and optimized Firestore schemas to efficiently schedule and persist learning progress

CHUNGUS Language | *Programming Language*

GitHub: github.com/marianoluiz/chungus-lang

Tech Stack: *Python, Pytest*

- Implemented a compiler pipeline including a finite-state-machine **lexer**, recursive descent **parser**, and two-pass **semantic analyzer**, with a designed AST and **symbol table** for program representation and semantic validation

- Implemented a **code generation** backend that **transpiled the language to C language** and implemented a **custom C language runtime library** supporting memory management and **dynamic data types**, while preventing heap leaks
- Contributed to developing **3,000+ automated tests** with pytest and CI via **GitHub Actions** to ensure compiler correctness

RAG Chatbot & Campus Guide | *University AI Web App*

GitHub: github.com/marianoluiz/plm-assistant

Tech Stack: *LangGraph, Flask, Python, React.js*

- Developed an **AI-powered** campus navigation and information assistant using a **RAG pipeline**, accurately answering queries from the **university handbook** (policies, schedules, faculty contacts, and student services)
- Minimized **AI hallucinations** through vector embeddings, indexing, and query optimization

SignifAI | *AI Rhythm Sign Language Game*

Live: signifai.vercel.app

Tech Stack: *React.js, TypeScript, TensorFlow, MediaPipe*

- Built a real-time web game teaching **Sign Language**, designed to support Deaf and hard-of-hearing users; tested with 80+ students for usability and engagement
- Implemented **hand gesture recognition** for 26 ASL signs using a custom TensorFlow model and MediaPipe for Computer Vision

THESIS

Stock Market Forecasting Using Deep Learning Models

- Developing an enhanced GRU model integrating a **profit-aware loss** function to optimize stock market price forecasting for **financial trading profitability** rather than purely statistical accuracy.
- Focused on **practical fintech applications**, bridging AI research with actionable insights for investors and trading strategies.

AWARDS

2nd Runner-Up — Android Game Category | *University of Makati, 14th IT Skills Olympics*

Project: Fiddle (AI rhythm game for ASL recognition)

Best Working App | *GDGoC PLM, InnOlympics 2025 Hackathon*

Project: TALLY (educational engagement mobile app)

3rd Place | Zero Vector Ventures, Stage 0: Build Nothing. Prove Everything; 2026

Case Study: AI Training Data Annotation Bottleneck

SKILLS

Languages: TypeScript, JavaScript, Python, Java

Frontend: React.js, Next.js, Bootstrap, TailwindCSS, Material-UI, HTML, CSS, SCSS

Mobile: React Native, Android Studio

Backend: Node.js, Express.js, Flask

AI / Data: LangGraph, scikit-learn, Pandas, NumPy

Databases: MySQL, PostgreSQL, Firebase, Supabase

Tools: Git, Docker, Linux, n8n, Postman, Figma

Certificates: [IBM FullStack Software Developer Certificate](#), [AWS Cloud Essentials Certificate](#)