

Luke John S. Taburnal

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EDUCATION

Immaculate Conception Institute

Bulacan, Philippines

Bachelor of Science in Computer Science

Jan. 2024 – May 2028 (Expected)

- **Cumulative GWA:** 1.39 (94% / Magna Cum Laude Equivalent)
- **Coursework:** Data Structures and Algorithms, Discrete Mathematics, Computer Architecture, Database Management
- **Honors:** 2nd Place at IT Summit 2026 Blitz Programming Competition

PROJECTS

NetNode | *C#, Avalonia, .NET, AXAML*

Apr. 2026

- Engineered a cross-platform logic simulator utilizing a decoupled Controller-based architecture to isolate high-frequency simulation state from the UI layer.
- Applied Data-Oriented Design (DOD) to optimize memory layout, enabling real-time gate propagation without performance bottlenecks.
- Leveraged Ahead-of-Time (AOT) compilation to achieve native-like performance with minimal start-up latency and a reduced memory footprint.

RAG Chatbot for Data Privacy Act | *ASP.NET Core, PostgreSQL, Preact, Astro*

Feb. 2026 – May 2026

- Developed a Retrieval-Augmented Generation (RAG) system delivered via a web chatbot interface to interpret legal documentation.
- Improved query relevance by implementing a hybrid search mechanism utilizing semantic and lexical (RRF) retrieval.
- Engineered a citation-based response system to ensure all LLM outputs are grounded in specific source text, reducing hallucinations.

Clinica | *Astro, Preact, ASP.NET Core, Google Sheets API*

Feb. 2026

- Architected a high-performance proof-of-concept for a medical booking system and landing page, leveraging Astro and Preact to achieve near-instant load times.
- Integrated Google Sheets API as a lightweight, user-friendly backend for administrative data management and appointment tracking.
- Optimized frontend delivery using Astro, achieving 95+ Lighthouse scores for performance, accessibility, and mobile-friendliness.

TECHNICAL SKILLS

Languages: C#, TypeScript, JavaScript, SQL, PostgreSQL (Postgres), Python, HTML/CSS, XAML/AXAML

Frameworks: ASP.NET Core, Entity Framework Core (EF Core), React/Preact, Astro, Avalonia UI, Tailwind CSS, .NET

Cloud & DevOps: Docker, Google Cloud Platform (GCP), Cloudflare, Neon (PostgreSQL), MonsterASP, CI/CD

Tools & Testing: Linux (WSL), Git, GitHub, xUnit, Visual Studio, VS Code, PowerShell, Bash

Soft Skills: Technical Documentation, Collaborative Problem Solving, Accountability