JOHN CARLO P. JACOBE

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Education

Quezon City University   **Aug. 2021 – June 2025**
Bachelor of Science in Information Technology   *Course*
Quezon City   *Location*

Technical Skills

Languages: HTML, CSS, JavaScript, TypeScript and Python
Frameworks/Libraries: React.js, Next.js, Node.js (Express.js), FastAPI, and Tailwind CSS
Databases: MySQL, PostgreSQL, MSSQL, and MongoDB
Developer Tools: Visual Studio Code, Postman, GitHub, Git, and Figma

Work Experience

Lightweight Solutions | Quezon City, Philippines   **Sept. 2024 – Feb. 2025**
Full Stack Developer | Intern
- Trained in Node.js (Express.js), TypeScript, Prisma ORM, and databases (PostgreSQL, MySQL, MSSQL, MongoDB).
- Built and maintained RESTful APIs with seamless database integration.
- Collaborated with Frontend Developers (Co-Interns) for smooth backend-frontend integration.
- Developed the LWS Invoice Web Application, automating invoice generation and management for internal processes.
- Created basic CRUD APIs using Python (FastAPI) with PostgreSQL.
- Studying AI development with Python.

Personal Projects

LWS Invoice Web Application   **Nov. 2024 – Feb. 2025**
Full Stack Developer
- Developed the frontend using Next.js and React Query for API integration.
- Built APIs with Node.js (Express.js), TypeScript, and PostgreSQL Database.
- Designed a system to manage clients and invoices, calculate the total outstanding amount of overdue and draft invoices, and automate invoice generation.

Capstone Research Project   **Sept. 2024 – March 2025**
Power Walk: Converting foot traffic into sustainable energy, utilizing piezoelectric transducers with RFID and data visualization for efficient power generation
Software & Hardware Engineer
- Developed a system to monitor and track the electricity generation and consumption of piezoelectric transducers connected to a battery. The system includes a chart displaying the number of students who use the charging station daily, an electricity chart showing the daily generated and consumed electricity, and a report generation feature.
- Engineered an eco-friendly charging station hardware device that will help students of QCU to have easy access when in need of a charging station, in case of emergency and sudden draining of personal phones, without the restrictions of the school policy.
- Created a hardware device that converts kinetic energy from foot traffic within the institution into mechanical energy using piezoelectric tiles.
- Developed a system utilizing Arduino and NodeMCU ESP8266 technology to authorize student charging via RFID card, enabling a seamless charging process with a simple tap of their official school ID.