Joseph Pongonthara

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Career Objective

Versatile Software Engineer with 5+ internship experiences across AI prototyping, backend systems, automation, and cross-disciplinary product engineering. Skilled in building scalable full-stack applications, designing LLM-integrated architectures, and translating ambiguous business and user requirements into robust, production-ready software. Passionate about delivering high-impact technical solutions in fast-paced, collaborative engineering environments.

Education

University of Waterloo — Waterloo, Canada
Bachelor of Applied Science in Mechatronics Engineering — *Graduated April 2025*

St. Michael's Choir School — Toronto, Canada
Valedictorian, Student Council President — *Graduated June 2019*

Technical Skills

- **Languages & Programming:** Python, Javascript, C++, Embedded C, SQL, HTML, CSS, MATLAB
- **Web & Software Development:** React.js, REST APIs, Next.js, TypeScript, Git, Client-Server Architecture, Responsive Design, Web Scraping
- **Tools & Frameworks:** Palantir Foundry & AIP, Azure Cosmos DB, PostgreSQL, Supabase, Arduino, UART & I2C Sensor Communication, Simulink, Selenium, JIRA
- **Core Competencies:** Full-Stack Development, Software Architecture, Distributed Systems, Real-Time Systems, Algorithm Design, Data Structures, Database Management

Professional Employment History

AI Prototype Engineer — Tenuto Labs — May 2025 - Present

- Building and deploying AI-powered prototypes for use cases at a big four accounting firm, integrating real-time data pipelines with LLM-backed systems.
- Designed backend architecture via Supabase and created the migration documentation for the firms Azure-based backend services to deliver secure, real-time AI solutions & scalable solutions.
- Constructed the front end integration between the Next.js & React system to the prototype's Supabase backend
- Designed API architecture and internal tooling decisions across frontend and backend components.
- Conducted technical discovery sessions and requirements gathering with stakeholders, including C-level executives, iteratively translating user feedback into clearly defined MVP features and functional software solutions.
- Delivered end-to-end AI feature from technical discovery to deployment in 10 weeks

Product Engineering Intern — Callidus Engineering — January - August 2024

- Developed internal automation tools using Python for mechanical drawing design validation and document QA test practices, reducing manual review time by 30%.
- Standardized CAD workflows and implemented version control for drawing revisions via Git-based documentation system.
- Acted as technical liaison across multidisciplinary teams (electrical, mechanical, software), streamlining data handoff processes.

Product Engineering Intern — Quasar Consulting Group — January - April, September - December 2022

- Delivered high-volume AutoCAD and Revit drawing packages for large-scale residential and commercial builds, often under aggressive timelines.
- Developed and maintained internal Python-based macro tools to automate repetitive workflows, including code compliance verification, multi-layered drawing audits, and detailed version history tracking for engineering documentation.
- Collaborated with electrical and architectural teams to ensure drawing integrity.
- Liased with approval officials at various municipalities to ensure and improve approval speed.

QA Automation Intern — i4i — January - April, September - December 2020;

- Developed and maintained Python/Selenium automated test suites for pharmaceutical regulatory documentation tools.
- Created test plans & automated regression suites, integrated with JIRA and internal dev pipelines.
- Collaborated with software engineers to reproduce, triage, and document bugs during product releases.
- Supported the team in transitioning from manual QA to automated test coverage, improving efficiency and scalability.