

JUTIPONG PUNTULENG

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SOFTWARE ENGINEERING STUDENT

Final-year Software Engineering student with strong experience in backend and full-stack development. Skilled in building REST APIs, optimizing database performance (up to **75%** faster queries), and designing efficient system architecture. Contributing to **VeloSim**, a real-world bike network simulation platform built with **BIXI Montreal**. Expanding knowledge in cloud platforms and modern DevOps practices to build scalable, production-ready systems.

EDUCATION

Bachelor of Software Engineering

Expected Graduation: April 2026

Concordia University, Montreal, QC

Relevant Coursework: Data Structures & Algorithms, Database Systems, OOP, Cloud Computing, Agile Development, Operating Systems

TECHNICAL SKILLS

- **Languages:** Python, JavaScript, TypeScript, Java, HTML/CSS
 - **Frameworks:** React, Next.js, Node.js, Express.js, Django REST Framework, FastAPI, Flutter, GraphQL
 - **Databases:** PostgreSQL, MySQL, MongoDB, Firebase Firestore
 - **Tools & Cloud:** AWS, Docker, Git, GitHub Actions, CI/CD, Vite, Tailwind CSS
 - **Practices:** Agile/Scrum, TDD, REST API Design, Code Review, Pre-Commit Hooks
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PROJECTS

Healthcare Management System — *Django, React, TypeScript, MySQL*

- Built a full-stack healthcare platform managing **447 patient records** and **303 staff accounts**
- Implemented **JWT authentication** with role-based access control for admin, doctor, and staff workflows
- Optimized database queries by **75%** (from 3s → 0.7s) via indexing, caching, and improved schema
- Designed REST API with **15+ endpoints** powering analytics dashboards
- Added automated code quality checks using **13 pre-commit hooks**

VeloSim – Bike Network Simulator (In Progress) — *Python, React, PostgreSQL*

- Contributing to an 11-person team building an open-source simulation platform with **BIXI Montreal**
- Implementing WebSocket connections for live simulation updates and data streaming
- Writing unit tests and performing code reviews in weekly Agile sprints
- Collaborating on architecture decisions, schema migrations, and data visualization

Real-Time Auction Platform — *React, Firebase, JavaScript*

- Built a real-time bidding platform for Hand in Hand Myanmar charity event
- Implemented **live Firestore synchronization** for instant updates across users
- Designed admin dashboard with CRUD operations and a multi-image upload gallery
- Added lightweight guest authentication using localStorage for improved UX

Campus Navigation App — *Flutter, Google Maps API*

- Developed cross-platform mobile app achieving **95% location accuracy**
 - Integrated Google Maps API and optimized navigation paths, reducing travel time by **30%**
 - Implemented real-time geolocation, building data, and interactive UI components
 - Set up CI/CD pipeline with automated testing and GitHub Actions
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LANGUAGES – **Thai:** Native, **English:** Fluent, **French:** Intermediate