

SAI ZAYAR HEIN

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Education

King Mongkut's University of Technology Thonburi

Expected Graduation: Jul 2028

Bachelor of Science in Computer Science

Bangkok, Thailand

- Courses: Software Engineering, Operating Systems, Computer Architecture, Intro to Programming, Algorithms and Data Structures, Object-Oriented Concept, Calculus, Linear Algebra

Work Experience

Freelance

Jul 2025 – Present

Full Stack Engineer

- Engineered secure **multi-location medical facility management system** as measured by supporting **15+ interconnected** database entities with **attribute-based access control** serving **unlimited** clinic/pharmacy branches
- Delivered streamlined **healthcare inventory** and **financial operations** by enabling real-time tracking of **9 medicine types**, automated invoicing, and multi-method expense categorization via **ExcelJS bulk imports/exports**
- Accomplished the development of a **production ready** Point of Sale **user interface**, featuring full **CRUD** operations, **ABAC**, and **PDF invoice** generation

Contributing Developer

May 2025 – Jul 2025

Backend Engineer

- Designed **5 API endpoints** for the **CS First Date** (Fresher Welcome) event, retrieving student and user data to display on the frontend website, used by **over 60 students**

Projects

Medical Clinic Point of Sale System | Front End | Back End

React | **Express** | **PostgreSQL** | **TypeScript**

- Developed a full-stack **healthcare Point-of-Sale** and management system that enhanced operational efficiency for **medical clinics and pharmacies** by implementing **attribute-based access control (ABAC)**, inventory tracking across multiple unit types, patient records and treatment documentation, dynamic invoicing and expense tracking, and financial reporting
- Utilized **PostgreSQL** for data storage, **Express** for a **RESTful API** backend, and **React** for the user interface

Expense Tracker | *Back End*

Express | **PostgreSQL**

- Engineered a backend system to track my spending, effectively helping me manage finances and reduce overspending by **20%**, utilizing **PostgreSQL** for the database, and a **Express backend**

Leadership

SIT Hackathon

Jun 2025

- Led a three-member team to complete a **Paradox themed, AI-integrated project** within **28 hours**, designing the system architecture, database, and flow, selecting **Shadcn** as the frontend UI library, and integrating **Gemini** and **Replicate** models for prompt and image generation

Technical Skills

Languages: Java, SQL, HTML5, CSS, JavaScript, TypeScript

Developer Tools: AWS, Postman, Git, Docker

Libraries/Frameworks: React, Shadcn, Tailwind, PostgreSQL, SQLite, MySQL, Prisma, Express, Hono, NodeJS