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github.com/noahnghg | [noah-portfolio](https://noah-portfolio.netlify.app)

EDUCATION

University of Calgary

Bachelor of Science in Computer Science

Calgary, AB

Sept 2023 – May 2027 (Expected)

- Science Internship / Co-op Program
- Faculty of Science Dean's List 2023-2024
- Relevant Coursework: Data Structures, Algorithms and Complexity Analysis, Relational Database Management Systems, Java Objected-Oriented Programming and Designs, Operating Systems, Computing Machinery, Machine Learning, Web Based Systems

EXPERIENCE

Deep Learning Software Developer Intern

May 2025 – September 2025

Ho Chi Minh City, Vietnam (Hybrid)

- FPT Software*
- Collaborated with a team of 6 in an Agile environment, developed a Deep Learning based system to detect and classify car defects like scratches, dents, paint chips, etc, and internal car part defects from X-ray images.
 - Achieved 90% accuracy in detecting outside car defects by training YOLOv8 model on our datasets, and 95% accuracy in detecting internal car part defects by training Mask R-CNN model on X-ray image datasets.
 - Integrated a RAG chatbot using LangChain and Gemini API to enhance user interaction, provide detailed explanations of the defects and maintenance tips.
 - Deployed the PyTorch model into a web-based application using FastAPI for a RESTful API backend, React.js for frontend, and PostgreSQL database to showcase the model's results, enabling users to receive real-time analysis via image upload or live camera feed.

PROJECTS

Fitelier | Next.js 16, TypeScript, TailwindCSS, PostgreSQL, Supabase, Vercel

January 2025 - August 2025

- Engineered a production-ready fitness tracking platform using Next.js 16, TypeScript, and Supabase PostgreSQL, implementing a normalized relational database schema with 7+ interconnected tables supporting complex many-to-many relationships and achieving 100type safety across the entire application stack.
- Implemented user authentication and authorization using Supabase Auth, enabling secure sign-up, login, and role-based access control for regular users and administrators.
- Created and maintained database migration scripts using SQL DDL/DML statements, implementing proper indexing strategies for query optimization, foreign key constraints for referential integrity, CHECK constraints for data validation, and automated trigger functions for timestamp management, demonstrating strong database administration and DevOps practices
- Designed and implemented a comprehensive service layer architecture with 6 modular services (profileService, workoutService, scheduledWorkoutService, trackingPlanService, trackingEntryService, exerciseService) abstracting all database operations, providing type-safe CRUD operations, complex filtering capabilities, and JOIN queries, enabling clean separation of concerns and maintainable codebase with 40+ reusable REST API methods.

LifeSync | Python, Flask, React, MongoDB, Gemini API

September 2024 – December 2024

- Developed a full-stack web application using Flask for REST API backend, React and TypeScript for frontend, and MongoDB for database. Implemented user authentication with JWT. Integrated Gemini API for task generation and automatic scheduling.
- Containerized the application using Docker, enabling easy deployment and scalability across different environments.
- Achieved roughly 30% increase in productivity by tracking and managing daily tasks, deadlines, with help of AI.

TECHNICAL SKILLS

Languages: Python, JavaScript, TypeScript, Java, C, C++, SQL, HTML/CSS, ARMV8 Assembly

Frontend: Next.js , React.js, Streamlit

Backend: Flask, FastAPI, Node.js

Developer Tools: Git, GitHub, GitLab, Docker, VS Code, Visual Studio, IntelliJ

Databases: PostgreSQL, MySQL, MongoDB

Platforms: AWS