Huy Tran

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EDUCATION

DePauw University <div align="right">Greencastle, IN</div>
Bachelor of Arts in Computer Science and Mathematics <div align="right">*Aug. 2021 – May 2025*</div>

EXPERIENCE

SAGO AGRO Co., Ltd <div align="right">Summer 2024</div>
Software Engineer Intern <div align="right">*Vietnam*</div>

- Engineered, deployed, and maintained a full-stack web application on AWS cloud infrastructure, improving product scalability and enabling streamlined online service delivery.
- Migrated 30GB of structured product data from Excel spreadsheets to AWS RDS PostgreSQL using custom ETL scripts and AWS DMS, boosting query performance by 40% and enabling real-time reporting.

University Social Science and Humanities <div align="right">Summer 2023</div>
IT Intern - Network Team <div align="right">*Vietnam*</div>

- Implemented a **two-factor authentication (2FA) system** for the school's E-Service Portal in collaboration with the cybersecurity team, mitigating authentication vulnerabilities and **reducing exploitability from 80% to 20%** in penetration tests.
- Developed and deployed **web application firewalls (WAFs)** to protect a server hosting up to **3,000 student accounts** from SQL injection, cut SQL injection vulnerabilities by 90% via real-time threat mitigation

IpserLab Co.,Ltd <div align="right">Summer 2022</div>
Software Development Intern <div align="right">*United States*</div>

- Constructed **the product categories filter feature** for the company application's front end, attracting over **7000 real-time visits**.
- Integrated **Stripe API** with the company's application, **boosting** transaction processing speeds by **50%**.

PROJECTS

Interview Prep | *Next.js, Node.js, Gemini API, Langchain, PineconeDB* | *Gemini AI Hackathon by Lablab.ai*

- Developed a **full-stack interview preparation platform** integrating **AI mock interviews**, **real-time code environment**, and **resume analysis** to assist **58 students** for upcoming technical interviews.
- Leveraged **React Query** for efficient API state management in a real-time code editor, optimizing interactions with LLM API calls, **reducing redundant requests by 60%**. Enabled CS students at DePauw to complete **100+ practice coding interview sessions** with immediate AI-driven feedback with minimal costs.

KonTask | *Flutter, Node.js, Next.js, MongoDB, OpenAI* | *McDermond Center & GGaGT Spring 2025 Pitch Competition*

- Designed and developed a **mobile-first platform** connecting **Greencastle's local service providers with customers in need**, integrating a **Retrieval-Augmented Generation (RAG)** approach for intelligent matchmaking.
- **Engineered the RAG pipeline** including multi-query decomposition and query routing powered by OpenAI, improving multi-service search efficiency by **40%**, reducing query resolution time from **3.8s to 1.9s**, and **increasing successful matches by 27%.**
- Collaborated with beta testers to gather feedback, leading to a **24%** improvement in search result relevance through iterative embedding tuning.

Open source contributor | *Github*

- Optimized F5-TTS (a text-to-speech system) for **Apple Silicon (M1/M2)**, enabling compatibility and **reducing the chance of system crashes due to RAM overload by 99%** on 8Gbs RAM devices.

DeBuddy | *Flutter, Django, PostgreSQL, SocketIO* | *Github*

- Created **mobile application** with a visual **DePauw's map** to **connect students** around the school campus.
- Designed and built **interactive chatbox** with encoded **DePauw's user IDs** only, enabling secure live messaging between users.
- Integrated **Google Maps API** to feature **live location** tracking and navigations and **route optimizations**.

TECHNICAL SKILLS

Languages: Java, Python, C/C++, SQL (Postgres, MySQL), TypeScript, JavaScript, HTML/CSS, R, GO, Ruby
Frameworks: React, Node.js, Flask, JUnit, WordPress, Material-UI, FastAPI, Express.js, PowerShell, PowerBI, Django
Developer Tools: Git, Docker, TravisCI, VS Code, Visual Studio, PyCharm, IntelliJ, Eclipse, AWS
Libraries: pandas, NumPy, Matplotlib, Flutter, MetaTrader 5 API, Google Maps API