Tran Khoi Nguyen (Noah) Pham

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🐙 Github | 🌐 Personal Website Portfolio

Education

University of Manchester **Graduating in Jun 2027**

BSc. (Hons) Computer Science *Manchester, United Kingdom*

- Relevant Coursework: Software Engineering, Algorithms and Data Structures, Data Science, Operating System, Database Systems, Artificial Intelligence, Computer Engineering & Architecture, Discrete Mathematics.
- Activities: Student Representative, Google Developer Student Club, Robotics Society, Manchester Trading Society.

Experience

Software Developer Intern 🔗 **Oct 2025 – Present**

Ping Proxies *Manchester, United Kingdom*

- Led the development of a full-stack open-source directory of **1000+** validated public DNS websites using **Next.js**, **TypeScript** and **PostgreSQL**, creating a strategic asset to attract high-quality backlinks and bolster domain authority.

Digital Design Web Developer 🔗 **Aug 2025 – Present**

University of Manchester Students' Union *Manchester, United Kingdom*

- Developed and deployed **20+** high-traffic web pages for the Students' Union platform, handling **150,000+** monthly page views and improving user engagement by **50%** through intuitive UI/UX design and seamless navigation flows.

Full Stack Software Engineer 🔗 **Dec 2024 – Oct 2025**

SpeakWisely *Manchester, United Kingdom*

- Led the end-to-end product lifecycle development of a full-stack AI-powered web application using **Next.js**, **TypeScript**, and **Supabase**, acquired and currently supporting **200+ active users** for IELTS speaking practice.
- Architected a **real-time multi-agent conversational AI**, using a **state machine** and **context engineering** to orchestrate seamless handoffs between **specialized agents** for a dynamic, multi-stage test simulation.
- Engineered an automated analysis pipeline with a secure **PostgreSQL** backend, integrating **Whisper API** and **LLM inference** to deliver feedback in **under 5 seconds** while ensuring data privacy with **Row Level Security**.

Projects

Multi-Agent Project Management System 🔗 | *Next.js, TypeScript, RAG, Python, Redis* **May 2025**

- Architected a **multi-agent AI backend** using **RAG modeling** and a **fine-tuned GPT-4.1 Nano** to autonomously manage and delegate project tasks, winning **1st Place** out of 100+ teams at the UCL AgentVerse Hackathon.
- Engineered an agentic digital twin data pipeline with Node.js and Redis to model individual team member skills and availability, enabling the core system to make intelligent, context-aware assignments.

Multiplayer Historical Trivia Racer 🔗 | *Next.js, TypeScript, React, PartyKit, Tailwind CSS* **November 2024**

- Developed a real-time multiplayer game using **Next.js**, **TypeScript**, and **PartyKit**, achieving game state synchronization with **<100ms** latency to deliver a fully functional prototype and winning **2nd Place Overall**.

Real-Time Study Space Finder 🔗 | *Next.js, React, Typescript, MongoDB, Mapbox GL* **October 2024**

- Developed a full-stack interactive mapping application with **Next.js**, **React**, **TypeScript**, **MongoDB** and **Mapbox GL** to visualise real-time study space availability, attracting over **500 monthly active users**.
- Architected a server-less back-end using **Next.js API routes** and **MongoDB** to serve geo-spatial data and power a proximity and amenity filtering, slashing student search time by an estimated **90%**.

AI-Powered Coding Interview Coach 🔗 | *Next.js, TypeScript, Python, Docker, Tailwind* CSS **April 2024**

- Built a full-stack AI coaching platform with a **Next.js** front-end and a secure **Python**/**Docker** back-end to deliver real-time, AI-driven feedback within a sandboxed execution environment.
- Integrated a low latency voice-driven interface by orchestrating a real-time transcription and text-to-speech pipeline.

Technical Skills

Languages: Python, TypeScript, JavaScript, Java, C++, SQL, Swift, HTML/CSS, Verilog, Assembly ,C.
Frameworks & Libraries:: Next.js, React.js, Node.js, Tailwind CSS, Framer Motion, Qt, PartyKit.
Database and BaaS: PostgreSQL, Supabase, MongoDB, MySQL, NoSQL, SQLite, Firebase.
Developer Tools & Platforms: Docker, Git, GitHub, GitLab, Vercel, Linux, Windows, CI/CD, Agile, Scrum, LaTeX.