

# WANG HAOZHEN

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## EDUCATION

### National University of Singapore

Aug 2023 - Present

*Bachelor of Computing in Computer Science*

- Relevant coursework: Computer Networks, Data Structure and Algorithms, Software Engineering

## EXPERIENCE

### Full Stack Developer Intern

*Synapse*

May 2025 - Dec 2025

- Built responsive frontend components for real-time video analytics applications using **Angular** and **TailwindCSS**
- Engineered scalable backend WebSocket services and **RESTful** APIs with **Flask** and **FastAPI**, enabling seamless integration for development teams of 10+ engineers across multiple projects
- Designed and optimized backend inference engines using **Redis** for caching and **PostgreSQL** for video session storage
- Led development and deployment of full stack web application and progressive web application with Computer Vision models on **Azure Web App** and **Azure Container App** services using **Docker**, serving **100+** patients in clinic trials.
- Automated report generation with CSV exports and built scripts to streamline development environment setup and startup flows

### Teaching Assistant for CS2030S Programming Methodology II

*NUS School of Computing*

Jan 2025 - May 2025

- Mentored students in **Java** programming, with a focus on Functional and Object-Oriented Programming paradigms

## PROJECTS

### ShowerBreak

*NUS HackNRoll*

Jan 2025 - Jan 2025

- Built a Telegram Bot and Chrome Extension that blocks certain websites until the user has showered for the day using **Python**
- Developed a **FastAPI** backend to integrate with **Supabase**, enabling efficient user data management and synchronization with the Chrome Extension
- Implemented an image classification pipeline with **OpenAI's CLIP** model, served through **Flask** endpoints.

### SwipeStyle

*NUS Orbitals*

May 2024 - Aug 2024

- Developed an IOS/Android clothing shop application with a Tinder-esque UI, deployed on **Expo Go**
- Created a responsive, interactive swiping UI for clothing selection in SwipeStyle using **TypeScript** and **React Native**
- Built an API-driven data retrieval function using **Axios** to fetch clothing data based on user preferences
- Built secure authentication and personalized onboarding workflows with **Supabase**
- Integrated **Stripe** for secure transactions, deploying backend on **Azure** through **GitHub Actions** and developed a checkout system enabling payment via credit card, PayNow, GrabPay, or Link Pay
- Implemented a collaborative filtering recommendation system using **TensorFlow Keras**, hosted on **Azure** via **Flask**
- Leveraged embedding layers for personalized clothing suggestions, achieving a precision score of **0.733**

### TestBuddy

Jan 2024 - Nov 2024

- Partnered with Tan Tock Seng Hospital to create an educational model for quizzing and training nurses, incorporating real-time speech recognition and response generation to boost learning effectiveness
- Designed responsive chatbot frontend using **React** and **Vite**, with **TailwindCSS**