

Nguyễn Mạnh Hùng

Software Engineer

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About me

I am a software engineer with experience in backend development using C#, Flutter, and ReactJS. Passionate about algorithmic problem-solving and competitive programming since high school. I enjoy building scalable systems and optimizing performance.

Educations

FPT HCM University

2020 - 2024

- Bachelor of information technology - GPA 8.0/10
- 100% scholarship

Nguyen Du High School for Gifted Students

2017 - 2020

- The national informatics team of Dak Lak province
- Honorable mention for the Informatics in the 2020 National High School

Awards & Achievements

- Third Prize for the 2023 ICPC Vietnam Southern Programming Contest
- Honorable Mention for the 2021 ICPC Vietnam National
- Honorable Mention for the Informatics in the 2020 National High School

Work Experience

FPT Software - Aloka team

08/2023 - 12/2023

- Team size:** 21 members.
- Description:** Specializes in calculation software in ultrasound and medical machines, performing calculation measurements, drawing images directly from multiple MODES of image display obtained from broadcasting equipment.
- Tech Stack:** C++, WPF, ASP.NET
- Responsibilities:**
 - Designed and implemented functionality to draw points and lines, measure, and analyze vascular parameters** (e.g., blood flow, vessel size, wall thickness, flow velocity) to assist in diagnosing medical conditions.
 - Investigated and resolved startup delays** caused by the initial data loading and processing from XML files. The issue stemmed from I/O-bound operations being executed on the UI thread, leading to rendering delays. Ensured that UI buttons dependent on data remained disabled until the data was fully loaded and enabled them upon completion.
 - Optimized and restructured API response formats** to meet specific application or client requirements, ensuring efficient data delivery and seamless integration with frontend systems.

Skills

- Backend:** Proficient in C#, ASP.NET and Entity Framework. Familiar with Redis and SignalR. Understanding of SOLID principles, some design patterns. Basic knowledge of gRPC, Message Queue (RabbitMQ), API Gateway.
- Database:** Proficient in PostgreSQL, SQLServer (query optimization, schema design).
- Mobile:** Proficient in Flutter using Bloc, GetX and Firebase (push notifications, background tasks).
- Frontend:** Familiar with Reactjs, TypeScript, TailwindCSS, MaterialUI, Zustand. Basic knowledge of Nextjs, Electronjs.
- Problem Solving:** Proficient in C/C++, Python, with a strong foundation in dynamic programming, graph theory, algorithms, and data structures, especially for competitive programming.
- DevOps & Tools:** Familiar with Docker, Nginx, Jira, GitHub Actions, and CI/CD pipelines.
- English:** TOEIC (Listening & Reading: 745), Fluent communication.

Highlight Projects

Huynh Hanh Financial Management System *(Freelance Project)*

10/2024 - 02/2025

- **Description:** Developed software for managing the weighing station at an agricultural product warehouse, recording truck weighing data through COM port and capturing images.
- The software analyzes images to identify vehicle variables and stores data for generating weighing slips or reports.
- **Tech Stack:** ASP.Net, Reactjs, Electronjs, Material UI, Tailwindcss, Docker, Nginx.
- **Responsibilities:** Full-stack Developer - Designed and implemented the core features, integrated external APIs, and optimized system performance.
- **Source:** [Website](#) [Github](#)

SmartMicro - IoT Platform for Smart Home Management

02/2024 - 04/2024

- **Description:** Developed an IoT platform for managing smart home devices (using MicroBit device - Microsoft), enabling users to control and monitor devices via Bluetooth and Wi-Fi. Features include real-time charts, voice interactions, and AI-driven automation for seamless home management
- **Responsibilities:**
 - Built a mobile app using Flutter with GetX for state management.
 - Connected to BLE devices using GATT and UART protocol to manage devices like lights and doors with Bluetooth.
 - Integrated SignalR for real-time data updates and chart displays.
 - Implemented voice interaction using Flutter TTS and OpenAI API for executing simple commands like turning lights on/off or locking/unlocking doors.
- **Tech Stack:** Flutter, Asp.net
- **Source:** [Github](#)

Jine Blog

04/2024 - 06/2024

- **Description:** My blog shares knowledge about algorithm, data structure, information technology, lifestyle, and other interesting aspects of life.
- **Main Topics:** Programming, technology, personal development, lifestyle.
- **Tech Stack:** Reactjs, Tailwindcss, Docker, Nginx.
- **Source:** [Website](#) [Github](#)

Ut Nhan Pharmacy Inventory Management System

02/2024 - 10/2024

- **Description:** Developed a pharmacy inventory management system for Ut Nhan Pharmacy chain, focusing on enhancing warehouse operations efficiency and optimizing inventory management.
- **Tech Stack:** ASP.Net, React, MedusaUI, Flutter.
- **Source:** (Private repositories due to company contract)
- **Role:** ASP.NET + Flutter, Collaborating with a team of five members and stakeholders to implement and refine inventory export/import flows.