

# 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

2024

- Team size:** 21 members.
- Description:** Developed software for ultrasound and medical imaging analysis, focusing on measurement.
- Tech Stack:** C++, WPF, ASP.NET
- Responsibilities:**
  - Implemented measurement and annotation tools for vascular analysis (blood flow, vessel size, wall thickness).
  - Optimized data processing by moving heavy I/O operations off the UI thread, reducing startup delays and improving responsiveness.
  - 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, Entity Framework and RESTful API. Familiar with Redis and SignalR (Websocket). Understanding of SOLID principles and design patterns. Basic knowledge of API Gateway (Kong) and Message Queue (RabbitMQ).
- 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 745](#), Fluent communication.
- Others:** Basic knowledge of Figma, Photoshop (UI/UX design and prototyping).

## Highlight Projects

### Huynh Hanh Financial Management System *(Freelance Project)*

08/2024 - 02/2025

- **Description:** Developed a web application to optimize agricultural operations, from crop management to large-scale weighing and export processes.
- **Tech Stack:** ASP.NET, React.js, Electron.js, PhoBERT, Material UI, Tailwind CSS, Docker, Nginx.
- **Responsibilities:**
  - **AI Chatbot & Marketing Page:** Developed a marketing landing page with an AI-powered chatbot using PhoBERT model to assist customers.
  - **Weighing System:** Built an admin panel to monitor truck weighing via web serial api, store data, print receipts, and export reports.
  - **Crop Lifecycle Management:** Tracked crop schedules (sowing, fertilizing, harvesting) and visualized planting areas using 3D GPS mapping.
- **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 the MicroBit device by Microsoft), enabling users to control and monitor devices via Bluetooth and Wi-Fi. Features include real-time charts, voice interactions, and ChatGPT API integration for AI-powered home control.
- **Responsibilities:**
  - Built a mobile app using Flutter with GetX for state management.
  - Connected to BLE devices via GATT and UART protocols to control devices such as lights and doors via 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.
- **Responsibilities:**
  - Built a Flutter mobile app for inventory management, supporting product import/export and barcode scanning.
  - Implemented basic CRUD operations using ASP.NET and collaborated with the team on advanced backend features.
- **Tech Stack:** ASP.Net, React, MedusaUI, Flutter.
- **Source:** [Github](#) (Private Repos)