Ren (Jason) Fu

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Introduction

Software developer with a passion for exploration, be it the world or the field of technology.

Education

Technical University of Eindhoven – BS Computer Science & Engineering Aug 2025

Skills

Technical: Full-stack, Embedded systems, Systems applications, DBMS
Programming Languages: Java, Javascript, Typescript, Rust, C++, Python, SQL
Languages: Dutch, English, Mandarin Chinese

Experience

Research assistant, Technical University of Eindhoven – Eindhoven, Noord-Brabant June 2024 – Present

- Implemented support for Cypher query language for our database engine using C++. Database
- Introduced Support for new arithmetic operations in the database engine such as POW, MOD, AND and XOR.
- Currently working on handling type promotions and over/underflow situations in the database engine.

Computer Science Intern, ASML – Veldhoven, Noord-Brabant Aug 2023 – Mar 2024

- Made a desktop application more portable to the web with minimal code rewriting by porting it to WASM.
- Wrote a guide that future developers can use to port other desktop applications to the web.

Tech Lead, Team HART – Eindhoven, Noord-Brabant Sep 2023 – Mar 2024

- Designed the architecture for an embedded device, it's communication scheme and interfaces.
- Communicated technical specifications to other departments. e.g. Marketing, Business.

Software developer, SGS – Sittard, Limburg Mar 2023 – Sep 2023

- Maintained internal web applications and developed new features for Angular applications used internally.
- Built embedded systems for the purpose of material testing using Arduino.

Projects

Gameboy Emulator (in progress), github.com/fasonju/gameboy_emulator Mar 2025 - Present

- Emulation of the Nintendo Gameboy hardware components (CPU, PPU, MBUS) using Rust.
- Provided an interface to the emulator using SDL2 for Windows, MacOS and Linux.
- Currently developing the CPU, implemented half of the instruction set.

VisFork, github.com/visfork-sep/VisFork Mar 2025 - Apr 2025

- **GitHub Visualization:** Data visualization of Git fork data using D3 to analyze project trends over time
- Designed and implemented the user interface, including state management, form control and error handling.
- Designed the architecture of the project by seperating logic into layers and providing interfaces for data flow.
- Taught less experienced developers in the team about best practices, pitfalls and tools in web development.

University project: Wanderly, Final grade: 8 Mar 2024 - Apr 2024

- Android application for collaborative planning of itineraries.
- Defined the backend interface and built the API using Java Spring Boot.
- Implemented the data layer on the frontend to access endpoints on the backend.

Unversity project: DBL Embedded systems, Final grade: 10 Apr 2023 - Jun 2023

- Created a robot that would classify objects and retrieve them using machine vision and log data to an administrator webpage using Rust.
- Created the websocket connection between the robot and the server.
- Implemented motor control on the robot.