

Minh-Hieu Nguyen

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Skills

Languages: C, C++, Python, Java, JavaScript, TypeScript, HTML, CSS, Markdown, Latex

Frameworks and Tools: Flask, Django, React, Qt, ExpressJS, Redis, PostgreSQL, MongoDB, Docker, GitHub CI/CD, Jest

Topics: Database, Caching, Network programming, Data Structures and Algorithms, Object-oriented Design, Operating Systems, Multithreading, HTTP, TCP, REST, GraphQL, Distributed Systems, Data Pipelines, ETL, OAuth, Linux, Unittest.

Experience

Software Engineer Intern, SDI Engineer Inc. – Bellevue, WA

September 2022 – June 2023

- Led a team of 5 interns in migrating an aircraft simulation and test analysis software on landing gear systems written in MATLAB/Simulink to Qt/QML/C++. [Product Link](#)
- Designed the user interface and QML components for file management, configuration, and numerical data input
- Implemented the C++ backend service layer that interacts with the interface for loading configuration, data model, project names and communicating with native Windows API
- Created a GitHub CI/CD pipeline with QTest for unittest and functional and Qt Installer Framework for deployment
- Managed the team's memos, presentations, meetings, backlog using Sprint and Agile development practice

Teaching Assistant, Seattle University – Seattle, WA

Jan 2022 – Sep 2023

- Hosted over 50 workshops and office hours to help new Computer Science students with programming concepts.
- Tutored over 100 students with topics like Java Programming, Memory Management, Object-oriented Programming.
- Graded and constructed positive feedback over 500 programming submissions and papers in various courses such as Python, Java, C++, Computation Language, Operating Systems.
- Collaborated with professors and other TAs on designing homework assignments.

Projects

Personal blog

<https://www.richardhnguyen.com/>

- Designed a technical blog about programming and technologies using ReactJS, GatsbyJS, TypeScript, TailwindCSS and MDX
- Created a fully-functional Content Management System to manage articles, static files using GraphQL and Gatsby API
- Created a great user experience with components like Syntax Highlighting, Table of Contents, Dark Mode and Clipboard

Reactor HTTP Web server in C

<https://github.com/richardnguyen99>

- Created a HTTP web server to handle multiple concurrent connections and support HTTP requests using C
- Implemented an event poll mechanism to listen to and handle socket connections using Linux epoll
- Designed a Producer-Consumer paradigm to process requests and constructed responses concurrently using POSIX Thread

APIs for searching universities and courses

<https://cursus.onrender.com/>

- Designed an API service for searching and querying information of universities and courses using Flask and PostgreSQL
- Provided an OAuth service for login credentials with OAuth Providers such as Google, Discord and GitHub
- Implemented a caching mechanism to prevent rate limit problem and fast content delivery with Redis and HTTP headers

OS-like portfolio

<https://portfolios.richardhnguyen.com/>

- Implemented an OS-like portfolio with terminal, file explorer, storage, editor applications using Vite, React and TypeScript
- Implemented OS-like behaviors such as dragging, resizing, maximizing, keybinding, selecting and context menu
- Designed a folder hierarchy to contains folders, file contents and its metadata using JSON and Local Storage API.

Education

[Seattle University](#) – BS in Computer Science

2021 - 2023

[Highline College](#) – AS in Computer Science

2019 - 2021