Mustafa Hasan

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SKILLS

Languages & Frameworks : C++, C, Ruby, Ruby on Rails, React, React Native, Python, MySQL, Tailwind, JavaScript
Tools & Environments : Git, GitLab CI/CD, Docker, Linux, Bash, VS Code, Android Studio, Figma

EDUCATION

University of Waterloo | B.A.Sc. - Computer Engineering 4th Year   Sep. 2020 – May. 2025
- OOP in C++, Real-time Operating Systems, Systems Programming and Concurrency, Algorithms & Data Structures, Compilers, Database Systems, Computer Networks

EXPERIENCE

Software Developer   Jan. 2024 – Mar. 2024
Semper8   Toronto, ON, CA
- Developed and styled interactive components for the Unorbi social media app, including critical components like attaching external content while messaging other parties
- Conducted rigorous testing on iOS and Android devices, gathering feedback to identify pain points and areas for improvement on the design to enhance usability

Software Developer   May. 2023 – Aug. 2023
Lawbrokr   Toronto, ON, CA
- Transformed the entire application's front-end by collaborating with the UI/UX Designer to convert designs into user-friendly interfaces utilizing Tailwind, HTML, CSS, JavaScript, and Ruby
- Conducted user research to implement new features such as email services integration using Ruby on Rails, Tailwind, and Docker
- Architected back-end model and controller to seamlessly integrate data into front-end for contemporary visualization through Chart.js to dynamically present real-time data

Product Manager   Sep. 2022 – Dec. 2022
Purolator   Mississauga, ON, CA
- Designed, launched, and managed new products, including an address book application
- Facilitated cross-functional teams, including Billing, ERP, Marketing, and Communication & Technology Support departments, to develop and implement retail requirements for corporate and agent stores
- Implemented agile methodologies to improve product management and led digitization proposal to reduce paper usage and costs, which improved customer experience and streamlined processes for retail staff and employees

PROJECTS

Scalable Social Media Blogging Site | *Ruby on Rails* | https://reddit-ish-jhiq.onrender.com
- Developed a feature-rich blog platform with user authentication via Devise, enabling seamless registration, post creation/editing, image uploads, and interactive features like voting, commenting, and searching
- Utilized Tailwind for front-end design, integrated Pagy for pagination, and implemented custom CSS to ensure the development of a user-friendly, modern, and responsive blog interface within an MVC framework

Real-time Operating System (RTX) | *C*
- Designed and implemented an RTX on Intel DE1-SoC board with a multi-programming environment for dynamic memory management, inter-task communications, and console I/O
- Developed a scheduling algorithm for dynamic task management, supporting task preemption, creation, and deletion through an implemented version of malloc & dealloc