Shreyash Hamal

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Education

University of San Francisco *San Francisco, CA* | **August 2021 - Present**
Bachelor of Science in Computer Science, Graduating May 2025

Relevant Coursework: C and Systems Programming, Data Structures and Algorithms, Software Development, Computer Architecture, Programming Language Paradigms, Linear Algebra, Discrete Mathematics

Skills

Languages: JavaScript, C, Go, C++, Python, Bash, Java, SQL
Technologies/Frameworks: React.js, Node.js, Express.js, HTML, CSS
Databases: MySQL, PostgreSQL, MondoDB
Tools/Systems: UNIX System Administration, Git, AWS, Docker
Methodologies: Agile, CI/CD, Unit Testing, Software Design and Architecture

Highlighted Experience and Projects

Backend Developer, Consilient Labs, Senior Team Capstone *San Francisco, CA* | **August 2024 - Present**

- Architected and deployed core REST API services using Node.js, driving secure user management and seamless CRUD functionality for scalable applications.
- Collaborated with team to evaluate system architecture trade-offs, optimizing for scalability and cross-platform compatibility.
- Implemented OAuth and integrated AWS Cognito for advanced role-based access control, strengthening system security and user authentication processes.
- Designed and optimized a reverse proxy solution, enabling dynamic routing to boost system scalability and operational flexibility.
- Led CI/CD pipeline management, streamlining code reviews, integration testing, and automated deployments to ensure high-quality, resilient releases.

Web Developer Intern, Mango Software Solutions *Kathmandu, Nepal* | **June 2023 - August 2023**

- Launched two responsive websites using HTML, CSS, and JavaScript.
- Developed custom themes and UI designs, improving client satisfaction.
- Increased website traffic by 40% through improved cross-device usability and optimized user experience across mobile, tablet, and desktop devices.

Projects

Pong Game **June 2024 - August 2024**

- Implemented real-time input handling and rendering, realistic game mechanics, ensuring smooth player control and accurate physics-based responsive gameplay.
- Engineered collision detection algorithms to handle interactions by using half-X and half-Y dimensions boundary detection.

Creatoverse **August 2024 - September 2024**

- Architected a CRUD-based web app, enabling real-time data synchronization with Supabase
- Improved app performance by 30% through optimized routing and asynchronous calls.

RISC-V Emulator, Course: Computer Architecture **January 2024 - May 2024**

- Developed an emulator in C, replicating a subset of RISC-V instructions to simulate CPU functionality.
- Implemented support for core RISC-V instructions, including arithmetic, logical, and control operations, enabling the emulator to execute simple programs as a RISC-V CPU would.
- Optimized memory management routines for efficient instruction fetching, decoding, and execution.

Web Crawler, Course: Software Development **August 2023 - December 2023**

- Built a scalable web crawler in Go, utilizing concurrency to download and parse data efficiently.
- Utilized Go's concurrency model to increase data scraping efficiency by 40%.