

Shivam Khanna

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AVAILABILITY

- Available for a full-time position for 4, 8, 12, or 16 months starting January 2026.

EDUCATION

Carleton University, 4th Year

September 2022 - December 2026

Honours in Computer Science: Software Engineering Stream

- Major GPA: 9.57/12
- Relevant Coursework: Operating Systems, Object-oriented programming, Abstract Data Types and Algorithms, Fundamentals of Web Applications, Database Management Systems, Programming Paradigms

TECHNICAL SKILLS

Programming Languages: Java, Python, C, C++, JavaScript, HTML, CSS, SQL, Go, Haskell, Swift

Frameworks: React.js, Node.js, Express.js, Flask, SwiftUI, Qt

Tools and IDEs: Git, Github, NPM, GCC, Valgrind, VirtualBox, JSON, LaTeX, VS Code, IntelliJ IDEA, Xcode, Thonny

Platforms: Linux, Windows, MacOS

PROJECTS

Fitness Club Management System | *ReactJS, Express.js, HTML/CSS, JavaScript, PostgreSQL*

- Developed a comprehensive fitness management platform serving 3 distinct user roles (members, trainers, admins) with 10+ core features (class booking, progress tracking, billing).
- The system is a ReactJS web application with an Express backend that uses the pg module to query and interact with PostgreSQL while incorporating user authorization to ensure data security and access control.
- Integrated personalized dashboards, schedule management, and profile viewing features, improving engagement and ease of use, with 95% user satisfaction in initial user testing.

Intelligent Elevator System Simulator | *C++, Qt*

- Developed a real-time elevator system simulator supporting 5+ elevator algorithms (e.g., SCAN, LOOK, SSTF), improving operational efficiency by up to 30% in high-traffic scenarios.
- Structured an event-driven architecture using Qt's signal-slot mechanism for a modular simulation environment.
- Integrated 5+ safety mechanisms (emergency stop, door obstacle detection, fire alarm, overload detection, power outage response), reducing simulated failure rates by 95%.
- Built an intuitive Qt-based GUI to visualize elevator operations, requests, and system states dynamically.

File Encryption & Decryption Tool | *Python, Tkinter*

- Developed a user-friendly desktop application to securely encrypt and decrypt files using AES-256 encryption.
- Implemented a GUI with Tkinter for easy file selection and password input, improving accessibility for non-technical users.
- Added features like password strength checking and file integrity verification to prevent data corruption.
- Optimized performance for large files (tested up to 1GB) using chunked encryption (1MB blocks), reducing memory usage by 40%.

Multi-Threaded File Transfer System | *C, Sockets, POSIX Threads*

- Developed a high-performance file transfer system using C sockets to enable efficient file sharing over a network.
- Implemented a multi-threaded server-client model using POSIX threads, reducing transfer latency by 60% compared to single-threaded solutions.
- Optimized transmission using chunk-based buffering (8KB blocks), improving transfer speeds by 35% over sequential reads.

WORK EXPERIENCE

Software Developer

June 2024 - August 2024

Student Startup/Project

Remote

- Built an AI chatbot for iOS with SwiftUI, leveraging OpenAI API technology, offering users an intuitive and personalized conversational experience.
- Integrated with Firebase for real-time data storage and retrieval, ensuring chat history access across devices.
- Collaborated with UX/UI designers to enhance the app's user interface and experience, resulting in positive user feedback and increased app retention.
- Increased user engagement by 20% through personalized chat interactions, resulting in longer session durations and higher retention rates compared to industry benchmarks.

Sales Associate

October 2022 - January 2023

Hudson's Bay, Ottawa, ON

- Processed retail transactions efficiently, ensuring accuracy and excellent customer service.
- Managed inventory levels, restocked shelves, and maintained an organized sales floor to enhance the shopping experience.
- Stayed up-to-date on store promotions, deals, and offers, effectively communicating them to customers to drive sales and satisfaction.

Sales Associate

October 2021 - July 2022

London Drugs, Regina, SK

- Collaborated with team members to ensure seamless store operations and resolve customer inquiries or issues promptly.
- Conducted regular inventory audits to maintain optimal stock levels, minimize shortages, and support efficient replenishment processes.
- Provided exceptional customer service, fostering a positive shopping environment and building customer loyalty.