

Manroj Gill

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Education

University of Alberta

Computer Engineering, BSc Co-op

Edmonton, Alberta

Sept 2023 — April 2028

Relevant Coursework:

- **Programming:** Object-Oriented Software Design, Introduction to File and Database Management, Introduction to Tangible Computing I & II
- **Hardware:** Electronic Devices, Computer Organization and Architecture, Introduction to Microprocessors, Electrical Circuits I & II

Skills

Languages/Frameworks: JavaScript, Java, Python, C/C++, HTML/CSS, SQL, ARM Assembly, Bash, React.js

Developer Tools: Visual Studio Code, Eclipse IDE, Spyder, GitHub

Simulation & Productivity Tools: LTspice, WaveForms, MATLAB, Excel, Word, PowerPoint

Projects

Quizzical | React, JavaScript, HTML, CSS, Open Trivia Database API

- Developed as a solo project in Scrimba's React course, applying component-based design and API integration
- Built an interactive quiz app with dynamic state management (useState, useEffect) and multiple game states (start, play, results).
- Integrated the Open Trivia Database API with custom parameters (difficulty, type, amount) to generate randomized quizzes.
- Implemented automatic scoring, styled feedback for correct/incorrect answers, and replay functionality to enhance user experience

Assembly Endgame | React, JavaScript, HTML, CSS

- Built as a capstone project in Scrimba's React course, developed step-by-step to practice advanced React concepts.
- Designed a word-guessing game with 8 attempts, removing one programming language per incorrect guess until only Assembly remains.
- Added interactive features including unique loss messages for each language, conditional UI styling with clsx, confetti animations, a win state, and a "New Game" reset option to enhance user experience.

Relevant Experience

Software Team Member, AlbertaLoop — Edmonton, Alberta

Oct 2025 — Present

- Working with Raspberry Pi-based systems and the pod's Finite State Machine (FSM) to understand real-time control and communication over CAN bus.
- Gaining exposure to Python development, version control, and modular software design within a multi-component system.
- Exploring computer vision and perception tools to support data analytics and safety applications.

Document Control Assistant, 1717616 ALBERTA LTD — Edmonton, Alberta

Mar 2022 — Aug 2024

- Organized and managed large volumes of records with attention to accuracy and detail.
- Developed and maintained systematic filing processes to improve retrieval and efficiency
- Coordinated information flow between teams by preparing, reviewing, and distributing key documents
- Ensured secure handling of sensitive information while producing clear, reliable reports

Certifications

- Learn HTML and CSS – Scrimba Course July 2025
- Learn JavaScript – Scrimba Course Aug 2025
- Learn React – Scrimba Course Sept 2025