

Shiv Patel

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Education

McMaster University

Hamilton, Ontario

Bachelor of Engineering (B.Eng), Computer Engineering Co-Op

Sept. 2023 - Apr. 2028 (Expected)

- **Relevant Courses:** Design & Projects in Engineering, Principles of Programming, Logic Design, Circuit Analysis, Artificial Intelligence - Innovative Technologies
- **Clubs & Teams:** McMaster Microbuild Engineering Society (**Software Development Officer**), MacEng Ambassador & Tour Guide, DeltaHacks X (**Hackathon Participant**), McMaster Gujarati Students Association (**VP Finance**), McMaster Intramural League (**Game Day Official**)
- **Awards:** McMaster Engineering Dean of Excellence Award (**\$7500**), McMaster University Award of Excellence (**\$3000**)

Projects

Snake Game — [github](#)

November-December 2024

C/C++, Git

Academic Project

- Developed a classic **Snake Game** using C/C++, utilizing **VSCode** to design an interactive, live-updating UI that dynamically responds to user input and game events.
- Implemented core game mechanics such as **real-time collision detection** and adaptive gameplay logic, ensuring smooth performance and an engaging user experience.
- Leveraged **object-oriented programming (OOP)** to modularize game components, improving code readability and enabling seamless feature expansion.

Power in Community - "The Porta-Basket" — [in](#)

Mar. 2024 – Apr. 2024

AutoCAD, AnsysGranta, PrusaSlicer, Microsoft Applications

Academic Project

- Collaborated on the **IMPACT Initiative** to design a collapsible basket prototype for wheelchair attachment, addressing mobility and accessibility challenges for a client with spina bifida, enhancing their independence.
- Used **AutoCAD** for 3D modeling and **laser cutting** for precise fabrication, ensuring the prototype's functionality and ease of use.
- Applied **PrusaSlicer** for **3D printing components**, and employed an **iterative design** process to refine the product, improving upon traditional wheelchair storage solutions.
- Led the **project management** efforts, coordinating an interdisciplinary team to develop a user-friendly, accessible solution, with plans to improve collapsibility, waterproofing, and item containment.

Lurnius — [github](#) [d](#)

Jan. 2024

Python, React, SQL, TypeScript, Next.js, Node.js, Express.js, Figma

Hackathon Project

- Designed a **responsive frontend using Next.js, React, and TypeScript**, optimized through **Figma prototypes**, to facilitate community engagement with an intuitive interface for voting and commenting on resources.
- Leveraged **Cohere's large language models (LLMs)** to automate the curation and classification of educational resources, enhancing personalized content delivery on a web-based interface.
- Developed a **scalable backend with Node.js, Express, and TypeScript**, integrating **PlanetScale's MySQL-compatible database** for efficient data management and user interaction.
- Integrated **Google YouTube and Books APIs** along with the **Open Educational Resources (OER) API** to dynamically source a diverse range of learning materials, maintaining content relevance and freshness.

Work Experience

McMaster University - Housing & Conference Services

April 2024 - Present

Residence Life Staff - Living Learning Community (LLC) Community Advisor (CA)

Hybrid

- Used **Teams, Outlook, and Excel** for scheduling, reporting, and tracking key performance metrics.
- Ensure all participants' physical, mental, and social safety, promptly reporting any issues to supervisors.
- Maintain **confidentiality** while **liaising with internal stakeholders** on student services matters.
- Organized **6+** community events each semester, using **Excel and Microsoft Project** for budget and task management.
- Created event flyers and digital content using **Canva**, increasing engagement by **25%**.

Skills

Languages: Python, C/C++, HTML/CSS, JavaScript, TypeScript, MATLAB, LaTeX

Software: Next, React

Hardware: Verilog (HDL), Arduino, Analog Discovery 2/3, Quanser Technologies

Tools: Figma, GitHub, Git, Quartus, PSpice, VS Code, Jupyter Notebook, Microsoft Office (Excel, Teams, Outlook, Word, PowerPoint), AnsysGranta, AutoCAD, Aceternity UI, Framer

Certifications/Training: WHMIS 2015, First Aid & CPR/AED (Level C), safeTALK, AODA, Ontario G-Class License