Nirmal Chaudhari

3rd Year Software Engineering | Seeking Summer 2024 Co-Op
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EDUCATION

McMaster University Sept 2021-May 2026
B.Eng. Software Engineering – Year 3 (GPA: 3.98) *Hamilton, ON*

- Organization/Awards: NSERC USRA, McMaster Excellence Award, Dean's Honour List (2021-2023)

WORK EXPERIENCE

McSCert
Software Research Co-Op (NSERC USRA) *May 2023-Present*

- Developed a new structured merge **algorithm** using **Python** to improve source-code merging by **30%**.
- **Designed Abstract Syntax Trees** to improve accuracy across multiple languages.
- Configured VCS like **Git** to use this merge tool, preventing potential merge conflicts.
- Regularly **performed tests** to validate the accuracy by programming Python scripts to compare targeted vs achieved results.

Software for Love
Front-end Developer *Aug 2021-May 2023*

- Collaborated with programmers in a virtual environment to develop web applications for clients.
- Developed UI using **JavaScript** frameworks **React.js** and **Next.js**, to improve accessibility by **20%**.
- Used **Node.js** to process incoming requests generate responses through backend.

PROJECTS

InstaCal
DeltaHacks IX Project *Jan 2023*

- Collaborated with a team to develop a website that processes images of food to return its nutrient data.
- Used React.js to develop the UI where the user can upload the image to be processed as a URL.
- Used Python in **Google Collab** to configure a **yolov5** model to identify the food and input details into a JSON file.
- Developed a function using **Flask** to create an API that connects the front-end and back-end data.

Macademy
Personal Project *Aug 2022*

- Used React.js, HTML and CSS to develop a website that help students improve their study habits.
- Improved user satisfaction by updating site to ensure data is regularly being saved to their LocalStorage.
- Refined site's performance **by 26%** by improving code efficiency and code complexity.

Q-Arm Project
Personal Project *Nov 2021*

- Developed efficient Object-Oriented codes using Python to identify and place tools in various bins.
- Improved efficiency **by 13%** by analyzing data from virtual simulations to predict physical simulations.
- Uploaded programs to physical arm by saving codes to a **Raspberry Pi** and connecting it to the Q-Arm.

SKILLS

Programming Languages: Python, Java, C, Assembly, Bash, JavaScript, R, Verilog, HTML, CSS
Tools: Git, Ubuntu, Docker, Node.js, React.js, Gatsby Cloud, VS Code, Quartus, Simulink, Raspberry Pi