

Gulkaran Singh

647-512-8096 | gulkaransingh.m@gmail.com | [linkedin.com/in/gulkaran](https://www.linkedin.com/in/gulkaran) | github.com/gulkaran

EDUCATION

McMaster University

Hamilton, ON

Bachelor of Applied Science in Computer Science, Minor in Business

GPA: 3.9/4.0

- **McMaster Award of Excellence:** achieving a final admission average in the top 10% of the Engineering faculty
- **Related Coursework:** Data Structure & Algorithms, Databases, Linear Algebra, Discrete Mathematics, Computer Architecture, Microeconomics, Organizational Behaviour, Information Systems in Business

EXPERIENCE

Canada's Wonderland

April 2023 – Aug 2023

Software Developer Intern

Vaughan, ON

- Built a scalable C# application using the .NET framework and the Model View ViewModel (MVVM) design pattern to automate scheduling processes for **1000+ employees** in the Rides department.
- Engineered an efficient scheduling automation tool for the Rides department, resulting in a **300% improvement** in supervisors' workflow efficiency through the implementation of a backtracking algorithm that adheres to shift times, breaks, certifications, and unexpected call-ins.
- Integrated real-time synchronization with a **SQL database** containing employee records to provide accurate information to supervisors and enable efficient scheduling.

ByteKode Hackathon

April 2021 – Aug 2022

Software Developer & Event Organizer

Toronto, ON

- Organized and facilitated two successful **non-profit** hackathon events for novice programmers, introducing **200+** attendees to basic programming concepts such as API usage and JSON parsing.
- Developed and delivered engaging webinars to educate participants on the fundamentals of coding, resulting in a **98%** satisfaction rate among surveyed attendees.
- Secured sponsorships from **12+** organizations, contributing to over **\$22,755** in prizes awarded to participants

PROJECTS

Handtex - Math OCR | *Python, React, TensorFlow, OpenCV*

Dec 2022

- Designed a convolutional neural network to predict mathematical symbols from images with a testing accuracy of 97% by utilizing TensorFlow deep learning
- Programmed an object segmentation algorithm using OpenCV's contouring methods, resulting in efficient extraction of individual symbols from handwritten expressions, improving model accuracy by 10%.
- Deployed a full-stack web application utilizing React and Flask API frameworks, allowing users to create and upload hand-drawn mathematical expressions for classification by the neural network, resulting in a user retention rate of 80%.

OurDorm | *React, Firebase, Socket.IO, Node.js, Material UI*

Sept 2022

- Developed a responsive full-stack web application with React and Material UI serving the frontend to help split expenses and manage budgets between roommates.
- Connected the Firebase user authentication system to the Firestore database to create a more efficient lookup algorithm when fetching user details.
- Managed group chats through Socket.IO rooms to allow a real time view of all the shared pages including the budget planner, shopping lists, and live chat.

YRCodes | *JavaScript, Bootstrap, HTML5, CSS, Google Code Prettify*

Aug 2021

- Launched an educational learning platform for York Region (YRDSB) students; ultimately supported and endorsed by the YRDSB superintendent.
- Incorporated comprehensive video explanations, exemplar code snippets, and a built-in compiler for practice problems.

TECHNICAL SKILLS

Languages: Python, JavaScript, SQL, Java, C, C#, C++, TypeScript, HTML, CSS, Haskell, XAML, LaTeX, MATLAB
Technologies and Tools: React, Node, .NET, Bootstrap, Firebase, Flask, Tensorflow, Figma, OpenCV, Socket.IO, AWS, Material UI, Tailwind, Git, GitHub, VSCode, AutoCAD, Fusion 360