

# Gulkaran Singh

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## EDUCATION

### McMaster University

GPA: 3.93/4.0

Bachelor of Applied Science in Computer Science, Minor in Business

Hamilton, ON

- **McMaster Award of Excellence:** final admission average in the top 10% of the Engineering faculty
- **Related Coursework:** Data Structure & Algorithms, Databases, Computer Architecture, Linear Algebra

## EXPERIENCE

### Scotiabank

Jan 2024 - Apr 2024

Trades Floor Full Stack Developer

Toronto, ON

- Delivered **4+** autonomous **full stack** projects leveraging **C# ASP.NET, Microsoft SQL Server**, and **Vue.js** to automate critical processes for various teams through rapid application development.
- Optimized internal controls processes by developing a robust **suite of applications** featuring new dashboards and portals, culminating in a **70% improvement** to the efficiency of day-to-day operations.
- Collaborated with cross-functional teams to migrate **15+ projects** over servers, improving page loads, site security, and system performance by **30%**.

### Canada's Wonderland

Apr 2023 - Aug 2023

Software Engineer 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.
- Implemented **k-means clustering** alongside image detection through a **convolutional neural network** in **Python** to analyze social media posts based on captions, hashtags, and comments to provide actionable insights on the most popular rides to various **marketing** teams.
- Engineered an efficient **backtracking algorithm** that adheres to shift times, breaks, certifications, and unexpected call-ins, resulting in a **300% improvement** in supervisors' workflow efficiency.

### ByteCode 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.
- Secured sponsorships from **12+ organizations**, contributing to a prize pool of **\$22,755** for participants.

## PROJECTS

### Handtex - AI Image Detection | Python, React, TensorFlow, OpenCV

- Designed a convolutional neural network with **TensorFlow**, utilizing **machine learning** to achieve a **97% testing accuracy** in predicting mathematical symbols from images.
- Deployed a full-stack web application utilizing **React** and **Flask API**, allowing users to create and upload hand-drawn mathematical expressions for classification, resulting in a user retention rate of **80%**.

### Personal Portfolio - gulkaran.ca | Typescript, React, Next 13, Three.js, Framer Motion

- Developed a **Next.js** and **React**-based personal portfolio website to showcase a collection of **4+ projects** and **130+ pages** of academic work, effectively demonstrating a diverse skill set.
- Created an engaging user experience by incorporating an intricate **Three.js model** on the hero page, demonstrating creative design skills and proficiency in web development technologies.

## TECHNICAL SKILLS

**Languages:** Python, JavaScript, C#, Java, Typescript, SQL, C, C++, HTML, CSS, LaTeX, MATLAB

**Technologies and Tools:** React.js, Vue.js, Next.js, Three.js, ASP .NET, JQuery, AWS, Docker, PostgreSQL, Bootstrap, Flask, Tensorflow, Figma, OpenCV, Socket.IO, Postman, PowerBI, GitHub Actions, AutoCAD