

# Hemal Rajput

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## Education

<b>McMaster University</b> , BEng in Software Engineering	Expected May 2027
• <b>GPA:</b> 3.73/4.0	
• <b>Minor:</b> Biochemistry	
• <b>Relevant Major Courses:</b> Data Structures and Algorithms, Computer Architecture, Software Engineering Practice and Experience, Intro to Software Engineering, Databases, Concurrent Systems, Software and Security	
• <b>Relevant Elective Courses:</b> Natural Language Processing, Practical Bioinformatics in the Genomics Era	

## Work Experience

<b>Data Scientist and Artificial Intelligence</b> , Canadian Space Agency – Longueuil, QC	Sept-Dec 2025
• Upcoming position: Expected to contribute to data science and machine learning projects supporting satellite operations	
• Anticipated tasks include implementing data science tools for reproducibility, configuring environments (e.g., Docker, MLflow), and automating AI pipelines	
<b>Software Developer</b> , Civiconnect – St. Catharines, ON	2024
• Designed and implemented a restaurant inventory management system, improving order accuracy and streamlining the procurement process by 30%	
• Developed and deployed scalable web applications for a variety of clients using a modern tech stack of React, Next.js, Tailwind CSS, and PostgreSQL-based systems such as Strapi and Supabase	
• Collaborated in weekly workshops, refining technical expertise and enhancing soft skills like teamwork, communication, and project management	
<b>Summer Engineering Intern</b> , Van der Graaf – Brampton, ON	2022-2023
• Programmed a soldering robot to automate repetitive tasks, improving soldering accuracy and efficiency	
• Created and debugged CNC machine programs, enabling precise manufacturing for custom designs	

## Personal Projects

<b>MidiMotion</b> , Python	<a href="#">Link to GitHub</a>
• Developed a real-time hand gesture recognition system using camera detection and MIDI signal processing to control amplifier settings on a BOSS-Katana amplifier	
• Engineered seamless integration between hand gestures and amplifier controls, enabling dynamic adjustments such as volume, gain, and effects without physical interaction	
<b>SneakPeak</b> , React Native, Python	<a href="#">Link to GitHub</a>
• Trained a custom machine learning model on Hugging Face for footwear identification using image data	
• Engineered RESTful APIs for image upload and identification, enabling real-time predictions on mobile	
<b>Machine-Learning Training</b> , Python	<a href="#">Link to GitHub</a>
• Trained AI algorithms like BERT and Electra on diverse textual datasets, fine-tuning them for domain-specific applications	
• Conducted model evaluation and submitted algorithmic predictions to Codabench competitions, optimizing performance metrics and benchmarking results	

## Technologies

**Languages:** Java, Python, C/C++, JavaScript, SQL, MATLAB, HTML/CSS | **Frameworks & Libraries:** React, Next.js, Tailwind, Hugging Face | **Databases & Tools:** PostgreSQL, Supabase, Strapi, Docker, MLflow, Git, Quartus