Ishpreet Nagi

YEAR 4 COMPUTER SCIENCE STUDENT

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EDUCATION

McMaster University — **Hamilton, ON, Canada**

B.A.Sc. in Computer Science (Co-op) — *Sept. 2021 - Apr. 2026*

- **Relevant Coursework:** Applications of Machine Learning, Data Structures and Algorithms, Databases, Computer Networks and Security, Applied Cryptography, Human-Computer Interfaces, Algorithms and Complexity, Intro to Data Mining

TECHNICAL SKILLS

Languages: Python, Java, JavaScript, TypeScript, C, HTML/CSS, Bash, SQL, Haskell, C++, C#
Tools and Platforms: Git, VS Code, Eclipse, Jupyter, Unity, MATLAB, DBeaver, Vercel, LaTeX
Frameworks and Libraries: React, Next.js, Astro, Tensorflow, PyTorch, Tailwind CSS, XGBoost, Optuna

EXPERIENCE

Software Engineer and Research Coordinator — **Waterloo, ON, Canada**

Healthcare Systems Research & Analysis Inc. — *June 2024 - July 2025*

- Led a team of developers in building, training, and optimizing machine learning models—including Random Forest Regression and Neural Networks—using techniques such as cross-validation and iterative imputation to improve model performance by over 50%.
- Managed an Agile environment by coordinating sprint planning, facilitating daily stand-ups, delivering progress updates to leadership, and providing technical guidance to ensure efficient collaboration and delivery.
- Built custom parsing and preprocessing scripts to clean and augment data for neural network training.
- Maintained version control best practices using Git, including branching strategies, code reviews, and pull-request workflows to support consistent, high-quality development.
- ***Skills:*** *Python, PyTorch, TensorFlow, scikit-learn, Pandas, XGBoost, Git, Microsoft Excel*

Machine Learning Analyst and Research Assistant — **Hamilton, ON, Canada**

McMaster University: Department of Computing and Software — *May 2023 - May 2025*

- Facilitated the testing and training of various complex LSTM neural network models in MATLAB, utilizing diverse real-world datasets for enhanced performance and applicability.
- Supported optimizing an 'E LSTM' model, reducing variable intake and improving efficiency and speed by 30%.
- Conducted the hyper-parameter tuning of a complex Genetic Algorithm utilizing Optuna, improving effectiveness by 20%.
- ***Skills:*** *Python, MATLAB, PyTorch, Pandas, Tensorflow, Optuna*

PROJECTS

Personal Website

ishpreetnagi.com — *October. 2025*

- Designed and developed a responsive single-page portfolio site with a minimalist aesthetic, streamlining navigation while highlighting key projects and interests.
- Developed an interactive UI with reactive background animations and device-adaptive rendering for consistent performance on mobile and desktop.
- Integrated Last.fm API to display real-time listening activity from Spotify, including currently playing tracks and last played.
- ***Skills:*** *Astro.js, TypeScript, Last.fm API, Tailwind CSS, Git, Vercel*

McMaster Room Booking Portal

github.com/IshpreetNagi/McMaster-Room-Booking-Portal — *Dec. 2023*

- Developed a prototype front-end interface for a web-based room booking portal, integrating rooms across McMaster University.
- Collaborated with a team of four developers, using Git for version control and repository management on GitHub to streamline communication and workflow.
- Built an interactive time booking tool, utilizing Tailwind CSS to promote structured web design elements, boosting application ease-of-use by 20%.
- ***Skills:*** *JavaScript, TypeScript, CSS, Git, Vercel, Figma, Tailwind CSS*

Tempestuous Turrets

github.com/IshpreetNagi/Tempestuous-Turrets — *Sept. 2022*

- Collaborated with two developers to create a point-and-click four-player local co-op game.
- Supported Unity development in C#, building over 30% of the interactive physics functionality and directing the creation of custom game assets.
- Deployed a web version of the program on Microsoft Azure via GitHub for a fully virtual experience accessible online.
- Compiled the program into a downloadable executable file using Unity for trouble-free distribution via GitHub.
- ***Skills:*** *C#, Unity, Git, Microsoft Azure, Adobe Photoshop*