

# Steven Koniaev

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## EDUCATION

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### McGill University

*Bachelor of Science. Honours Computer Science, Minor in Statistics*

GPA 3.93/4.0

Montreal, QC

*Sept. 2021 – May 2025 (Expected)*

## EXPERIENCE

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### Emerging Technologies Analyst

*Global Affairs Canada*

May 2023 – August 2023

*Ottawa, ON*

- Investigated use cases for the Microsoft Hololens 2 through Unity and the mixed reality tool kit.
- Using Azure environment, sent IoT data to devices for monitoring and control, creating digital twins.
- Collaborated on fine tuning AI models for different applications.

### Teaching Assistant for Computer Science Course

*McGill University*

Jan. 2023 – April 2023

*Montreal, QC*

- Worked as a Teaching Assistant for COMP 273. Performed all teaching assistant duties including grading, office hours, and answering questions online.
- Communicated with professors to maintain deadlines and schedule of the course.
- Supervised students during midterms and provided clarification.
- Helped in grading midterms and provided feedback on midterms and assignments.

## PROJECTS

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### Investigating Transformers | *Python, PyTorch*

July 2023 – Present

- Implemented the Transformer architecture with masked attention using PyTorch.
- The character level model tries to create more of what it has been trained on.
- Implemented Vision Transformer Architecture for image classification tasks.
- Currently working on training an OCR model for math equations.

### Ubisoft Game Labs Competition | *Unity, C#, C++*

Sept. 2021 – Dec. 2021

- Collaborated with a team of McGill students to complete a game prototype in a semester.
- Mentors from Ubisoft guided us throughout the project.
- The result was a two player, online multiplayer game built in Unity which incorporated networking elements.
- Teams came together, shared, and played each others games in a ceremony at the end of the semester.

### Unity ML Agents | *Unity, C#*

May 2023

- Trained agents in a simulated environment to solve several tasks such as an obstacle course.
- Worked together with a group to train different agents in different environments and see how the agents would respond.

### Machine Learning From Scratch | *Python, NumPy*

August 2022

- Implemented machine learning concepts and algorithms from scratch to get a deeper understanding about topics such as gradient descent and backpropagation.
- Using this home made framework, created a training loop for image classification.
- Digits written in GUI window are passed into a neural network where the model makes a prediction.

## TECHNICAL SKILLS

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**Languages:** Python, C#, C/C++, OCaml, Java, Bash, R, SQL, JavaScript, HTML/CSS

**Frameworks:** React, Node.js, Flask, Material-UI

**Developer Tools:** Git, Docker, Azure, Unity, Unreal Engine, Linux

**Libraries:** PyTorch, Tensorflow, Pandas, NumPy, Matplotlib, Qiskit, Openai-gym