

# Colin De Vlieghere

📍 Boston, MA; Flexible Northeast US  
In-Person / Remote

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**AI Software Engineer | Cutting-Edge Machine Learning | NLP & Computer Vision**

## WORK EXPERIENCE

### QUALCOMM

Machine Learning Engineer Co-op

Markham, Canada  
May 2022 – May 2023

- Enhanced high-performance **ML model compiler** for custom **deep learning hardware** accelerator, improving inference time and unlocking new customer use cases for mobile/auto/AR.
- Implemented **model translation** software to convert between custom representations, leading to improved interoperability across different model formats.
- Designed and prototyped an audio-based ML environmental condition monitoring system using Arduino, contributing to cost savings and coverage in weather monitoring applications.
- Conducted **collaborative problem-solving** sessions and orchestrated software projects across teams, facilitating knowledge sharing to enhance team productivity.

### SMARTECHS (AR company)

Software Engineer Intern

Conshohocken, PA  
Total 12 months (2019, 2020, 2021)

- Created document-to-JSON parser to increase data processing efficiency.
- Coordinated developers across teams, drafted user stories & Figma designs to improve UX.
- Spearheaded ISO27001 policy draft and defined robust privacy and security policies.

## EDUCATION

### BSc - Computer Science w/ Focus in AI; Mathematics Minor

University of Toronto

Awards: U of T Scholar, Dean's List Scholar, Innis College Exceptional Achievement

Toronto, Canada  
Sept 2019 - June 2024  
3.9 GPA

## PROJECTS

**NLP-based web app** to recommend healthy alternatives to food cravings. Uses embeddings from **spaCy**, with custom vector database using **FAISS** for speed. Presents user with detailed results, backed by nutrition facts. [Feeling Hungry](#)

**Reinforcement learning AI** trained using the NEAT genetic algorithm to play Super Mario. Emulates the game using Gym in Python. [SuperMarAI](#)

**Open-source** contributions to various projects such as [pkg2appimage](#), a tool for generating Linux versions of apps, or GNOME (Linux desktop) extension [audio-output-switcher](#)

**Algorithmic solver** for Mathler, a Wordle-like game. Improves brute-force by constraining search space using domain knowledge. [Mathler solver](#)

## KEY SKILLS

- ✓ **Python, C++, PyTorch** / TensorFlow / TFLite / ONNX, **quantization**, ML model training, inference & theory
- ✓ LLMs, transformers, NumPy, Pandas, C, Java, Docker, Bash, Linux, Cloud, APIs, SQL, Agile, Scrum, Git, Jira, Confluence
- ✓ **English & French** (native/C2), **Mandarin** (spoken/B2), **Spanish** (intermediate/B1)
- ✓ Team player, excellent interpersonal and multicultural communication skills