

# Benjamin Mah

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## EDUCATION

### University of Toronto

May 2026

*Bachelor of Applied Science in Engineering Science*

*Toronto, Canada*

Major in Machine Learning Engineering, Minor in Engineering Business

Relevant Courses: Data Structures & Algorithms, Neural Networks, Deep Learning, Operating Systems, Probabilistic Reasoning

## EXPERIENCE

### Asana

May 2025

*Incoming Data Science Intern*

*Vancouver, Canada*

### Mozilla

May 2024 – Present

*Machine Learning Engineer Intern*

*Toronto, Canada*

- Developed, trained, and deployed machine learning models using **XGBoost** and **scikit-learn** for automating bug assignment, triaging, and predicting patch failures, reducing manual triage time by **50 hours per month**
- Conducted research in collaboration with **Ubisoft**, **Queen's University**, and **Polytechnique Montréal** to develop a **GPT-based** code review bot, used by over **200 engineers**, automating code review processes, leading to a **30%** reduction in review time and a measurable improvement in review quality through increased code coverage
- Fine-tuned pre-trained large language models using **Hugging Face Transformers**, **PyTorch**, and **PEFT** for generating code that addresses review comments, using a dataset of **15,000+** annotated patch fixes and review comments, achieving an **8%** higher acceptance rate compared to baseline models like **GPT-4** and **Claude 3**
- Automated key workflows in **Bugzilla**, a bug management system, with **BugBot**, implementing automatic flag requests and targeted notifications, decreasing manual intervention and processing over **500 bug reports** monthly

### Cohere

September 2023 – April 2024

*Data Specialist*

*Toronto, Canada*

- Audited and annotated machine learning datasets using **Scale AI**, identifying and correcting labeling errors across thousands of samples, enhancing model performance and saving over **100 hours** of processing time each month
- Conducted in-depth comparative analysis of LLM-generated code completions written in **Python**, **JavaScript**, and **SQL**, refining validation processes to align with coding standards, resulting in faster deployment cycles
- Collaborated with cross-functional teams, including data engineers, to validate **data accuracy and completeness**

### Royal Bank of Canada

May 2023 – August 2023

*Machine Learning Engineer Intern*

*Toronto, Canada*

- Developed a machine learning tool for financial advisors, using semantic search and parallel processing with **Dask** and **NumPy** to efficiently process user queries from financial databases, boosting response speed in information retrieval (IR) and extractive question answering (EQA) by **40%** through optimized query embeddings
- Designed and implemented a scalable multi-type file processing pipeline with efficient retrieval endpoints, using **Python** and **Amazon S3** to handle various complex textual data formats, reducing proof-of-concept (PoC) development time by **10 hours** per project and standardizing reusable code for future generative AI initiatives
- Integrated **LangChain** and **Qdrant** with **OpenAI models** to enhance user query response accuracy, optimizing embedding strategies and indexing techniques, achieving a **67%** increase in retrieval precision and response quality

## PROJECTS

### Audio Style Transfer | *PyTorch, Librosa, NoiseReduce*

- Developed a neural style transfer model to transform non-standard English accents into a standardized accent, validated using Google's ASR model to calculate Word Error Rate (WER) and improve transcription accuracy
- Implemented a robust data processing pipeline using **Librosa** and **NoiseReduce** for audio decoding, noise reduction, and spectrogram generation, supporting the training of the NST model built with convolutional layers

## SKILLS

**Languages:** Python, SQL, C/C++, JavaScript, HTML/CSS, MATLAB

**Frameworks/Tools:** PyTorch, TensorFlow, LangChain, Dask, AWS, Flask, Git, VSCode, Jupyter, JAX, Postman

**Libraries/APIs:** Hugging Face Transformers, pandas, NumPy, XGBoost, PEFT, Matplotlib, ChromaDB, Qdrant

**Interests:** Record Collecting, Studio Ghibli, Videography, Music Production, NBA, Formula 1