# Garreth Edderick Lee

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#### **EDUCATION**

#### University of British Columbia

Vancouver

Bachelor of Science in Computer Science and Statistics

Sep 2021 - Present

Clubs: UBC Biztech, TEDxUBC, Data Science Club, Google Student Developer Club

#### EXPERIENCE

### Machine Learning Engineer Intern

Vancouver

Hugging Face

Sept 2024 - Dec 2024

- Worked on improving text extraction for future Fineweb datasets
- Conducted experiments to determine optimal tokenization strategies for mathematical reasoning in LLMs and wrote a detailed report on the Hugging Face platform
- Created and maintained internal tools to better visualize and inspect LLM pretraining data

Data Science Intern

Toronto

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May 2024 - Aug 2024

- Developed an ML-based in-house solution to route engineering on-call tickets, improving accuracy from 40% to 80% and saving thousands of manual labor hours annually
- Optimized and increased coverage on the PII (Personal Identifiable Information) scrubber used for the company's internal LLM gateway
- Developed a pipeline to automatically update an in-house vector database with dynamically changing metadata, reducing manual data management for engineering managers and ensuring real-time accuracy

#### Member of Technical Staff

Toronto

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Sept 2023 - Dec 2023

- Built and optimized Python and Spark data pipelines processing terabytes of pretraining data for large language models
- Assembled an LLM-based pipeline for document quality evaluation, saving thousands of dollars in human annotator costs
- $\bullet$  Integrated language identification models to existing HTML parsing pipelines, enhancing downstream textual data quality by 20%

#### **PROJECTS**

# Email Generation Model Fine-tuning | PEFT, Python, Ollama, Transformers

May 2024

- Fine-tuned Mistral 7B to streamline the creation of initial email drafts for UBC Biztech's partnerships team
- Managed end-end preparation of the dataset for effective model training and ensuring high-quality input for the fine-tuning process.
- Deployed the fine-tuned model on a local machine using Ollama, optimizing the inference process and maintaining control over sensitive information.

## TECHNICAL SKILLS

Languages: Python, SQL, R, HTML/CSS, Java, Javascript, Bash

Frameworks: Django, React, Flask, JUnit, Streamlit

Tools: Git, Docker, Google Cloud Platform, Amazon Web Services, Apache Airflow, Terraform, Spark, dbt

Libraries: Pandas, Tensorflow, NumPy, Pytorch, Scikit-Learn, Ggplot, Seaborn