## Sami Ansari

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# **Experience**

## **AI Engineer (Contract)**

Oct 2024 - Dec 2024

Rootly, Toronto, Ontario, Canada

- Built proof-of-concept AI agent framework using RAG for automated root cause analysis of SRE incidents
- Developed end-to-end data pipeline demo integrating Rootly, Slack, GitHub using webhooks and API integrations to generate actionable ML insights
- · Implemented custom chunking algorithms for processing large-scale observability data from monitoring systems

### Machine Learning Engineer Intern

Apr 2024 - Oct 2024

Cohere, Toronto, Ontario, Canada

- Enhanced LLM quantitative reasoning by **3**% through development of novel fully synthetic training dataset without human annotation, becoming the **first engineer to contribute a fully synthetic dataset** to Command-R-Plus foundation model
- Created specialized evaluations for length control and adapted FinanceBench for base model assessment
- Conducted model ablation studies analyzing impact of specific datasets on cross-category performance
- Collaborated cross-functionally with evaluations, multilingual, and safety teams to generate synthetic multilingual data for model training

## Senior Data Quality Team Lead

Jun 2023 - Apr 2024

Cohere, Toronto, Ontario, Canada

- Designed and deployed scalable data labeling platform with React/TypeScript frontend and Firebase/Firestore backend, processing 100,000+ tasks used by 200+ labelers, **saving \$3M in operational costs**
- Built backend data infrastructure and developed Python scripts with internal AppsScript applications analyzing tasks to extract insights for ML model improvements
- Led SFT/RLHF labeling projects and first cohort of STEM and code-focused labelers, working with external data vendors to consolidate data quality standards for post-training

# Data Quality Specialist

May 2023 - Jun 2023

Cohere, Toronto, Ontario, Canada

- Delivered high-impact annotations including preference ranking, quality scoring, and SFT conversation generation across all domains
- Contributed to establishing data quality standards and annotation best practices

# **Technical Skills**

**Languages:** Python, TypeScript/JavaScript, SQL, C/C++, Bash, Nix

ML & AI: LLM Fine-tuning, RAG, RLHF, SFT, Synthetic Data Generation, Model Evaluation, PyTorch, JAX

Frameworks & Libraries: FastAPI, React, Pandas, Polars, Tailwind

Infrastructure: AWS (S3, Lambda, Bedrock), Docker, Linux, NixOS, Slurm, Git, Redis, DuckDB, Firebase, Firestore

# **Speaking**

#### Guest Lecturer on AI and Synthetic Data Generation for MMA Program

2024

Queen's Smith School of Business, Kingston, Ontario | 50+ graduate students

# **Projects**

#### NixOS System

- · Comprehensive system configuration for Desktop, Laptop, and Server environments
- · Integrated services including Syncthing for file synchronization and Forgejo for self-hosted Git
- Samis-Randomizer A mod for Minecraft for One Block worlds
- All The Mods 10: To The Sky Contributor to popular Minecraft modpack
- **Samis-AE-Infinity** Applied Energistics focused mod