

Josh Rinaldo

joshcrinaldo@gmail.com | joshrinaldo.com | github.com/JoshuaRinaldo

EXPERIENCE

Educational Testing Service Canada – Remote

SWE II - AI/ML

Oct 2024 – Present

- Led development of an LLM-assisted authoring and editing platform for test prep content, increasing average revenue per user (ARPU) from ~\$4 to ~\$12 within 90 days of launch
- Developed an AI agent to automate document editing, reducing contracting costs by \$5,000 per edit cycle
- Designed and deployed a custom Retrieval-Augmented Generation (RAG) service, improving retrieval accuracy by 50%+ over baseline solutions via semantic search and LLM optimization
- Collaborated with education SMEs to launch educational products that met accessibility and diversity standards
- Provided technical leadership by leading educational presentations on AI and authoring internal blog posts
- Created CI/CD pipelines to automate the testing and deployment of APIs and standardize code style
- Architected and maintained production ML infrastructure using AWS CDK

SWE I - AI/ML

Oct 2022 – Oct 2024

- Reduced cloud costs by 30% by rebuilding docker images to transition from AMD64 to ARM64 CPU architecture and redesigning infrastructure to improve efficiency
- Improved NLP inference model accuracy from 20% to 80% by applying transformations to training data
- Built and deployed ML models that assess fluency and soft skills by performing inference on written language and multimodal (audio, video) features
- Increased model transparency by creating docker images that enable inference models to serve realtime model explanations using SageMaker Clarify
- Built a model training and deployment pipeline that allows engineers to fine-tune models, perform hyperparameter optimization using Weights and Biases (W&B), and deploy models.

Data Analyst

May 2022 – Oct 2022

- Created data processing pipelines that extract, transform, and organize data using Python and SAS
- Developed PowerBI dashboard templates that visualize assessment sales and student performance metrics

PROJECTS

Text Counterfactuals

[github/JoshuaRinaldo/text_counterfactuals](https://github.com/JoshuaRinaldo/text_counterfactuals)

- Developed a text counterfactual generation pipeline that creates counterfactuals by generating model explanations using SHAP and creating alternatives using a masked language model

Photo Gallery

joshrinaldo.com/gallery

- Built serverless image processing pipeline using AWS Lambda, Rekognition, and Bedrock to automatically extract EXIF metadata, generate AI captions, and enable multi-modal search by visual labels and color.

SKILLS

- **Languages:** Python, TypeScript, SQL, SAS, Bash
- **Technologies:** AWS, Containerization, Docker, Weights and Biases (W&B), Visualization (PowerBI), FastAPI, Flask, Git, Data Science and Machine Learning Libraries (scikit-learn, PyTorch, HuggingFace, pandas, NumPy)

EDUCATION

Queen's University, Bachelor of Education

July 2022

Queen's University, Bachelor of Science, Physics

April 2021