Matt Fergoda

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I'm a full stack machine learning engineer with experience building and deploying ML models, working across the technology stack, and writing high-quality, maintainable, and well-documented code. I'm looking for roles where I can build high-performance ML systems or platforms that empower the end user to do awesome things.

TECHNICAL SKILLS

Languages: Python, Javascript, SQL, HTML, CSS **Frameworks:** Flask, Django, FastAPI, Express, React

Cloud: AWS, Azure, Databricks

Machine Learning / Data Science Tools: Sci-Kit Learn, XGBoost, Tensorflow, pandas, NumPy,

RECENT PROJECTS

AI-Powered Semantic Image Search Engine

February 2024

Blog Post | Live Demo | GitHub (Frontend) | GitHub (Backend)

- Built an Al-powered image search API using OpenAl's CLIP model and a vector database in PostgreSQL.
- Containerized and deployed a demo on an AWS ECS cluster allowing users to quickly search across 25,000 images based on their content.

EXPERIENCE

Professional Development

Sept. 2023 – Jan. 2024

Rithm School Full Stack Engineering Bootcamp

San Francisco, CA (Remote)

- Attended a full-stack software engineering bootcamp to expand and formalize my engineering skill set in web development.
- Built RESTful APIs and dynamic front ends with extensive unit and integration testing.

Data ScientistAug. 2022 – April 2023

Advata Bellevue, WA

- Researched and developed an unsupervised learning algorithm in Python and Databricks for helping customers find common causes of healthcare denials, replacing a third-party service and saving our company \$7,000 per month.
- Deployed the aforementioned model to UAT and production, owning post-production maintenance of the service including training new users and incorporating user feedback for ongoing algorithm improvements.
- Owned collaboration with a cross-functional team including a VP, customer success engineers, software engineers, and product leads to develop and maintain analytics product features.
- Prototyped a deep-learning-based forecasting model and an explainability framework to find drivers of revenue.
- Wrote and maintained wiki-style documentation and presented results to the entire engineering org for each solution I developed.
- Worked according to Agile methodology.

Data Scientist May 2021 – July 2022

Valence Consulting (now Kopius)

Bellevue, WA

 Rapidly prototyped regression and classification machine learning (ML) models in Python and Databricks for finding the root causes of healthcare claim denials for customers across 13 health systems nationally affecting billions of dollars of customers' annual revenue. • Built and maintained high-throughput data (>10M rows) and ML pipelines optimized for scalability, data versioning, and easy integration with ML development workflows.

Data ScientistAug. 2018 – April 2021Hitachi ConsultingBellevue, WA

• Engineered a custom change-point detection ML model (F1-score > 0.90) as part of an industrial

- machine vision solution for a large plant-and-equipment contractor.
 Used classical ML methods and neural networks to achieve super-fast inference speeds on edge devices.
- Prototyped a classification model in Python and Databricks for predicting potentially dangerous inputs to a manufacturing process, allowing for engineers on the shop floor to take appropriate action to prevent machine failure.

EDUCATION

Rithm School 2023

Full Stack Web Development Bootcamp

University of Puget Sound

2014-2018

Bachelor of Science, Physics, Summa Cum Laude Tacoma, WA