

# Matt Fergoda

Seattle, WA (open to remote) | +1 (650)-483-3421 | [matt.fergoda@gmail.com](mailto:matt.fergoda@gmail.com) | [mattfergoda.me](http://mattfergoda.me) | [linkedin.com/in/matt-fergoda/](https://linkedin.com/in/matt-fergoda/) | [github.com/mattfergoda](https://github.com/mattfergoda)

I'm a software engineer with experience building RESTful APIs, multi-page applications, and frontends vanilla-ly and with React-based frameworks. I'm looking for roles where I can work across the technology stack and leverage my experience building machine learning models for companies in manufacturing and healthcare during my previous career as a data scientist.

## TECHNICAL SKILLS

**Languages:** Python, Javascript, TypeScript, SQL, HTML, CSS

**Libraries:** React, React Testing Library, React Native, React Router, bcrypt, WTForms

**Frameworks / Tools:** Node, Express, Jest, Django, Flask, NextJS, SQLAlchemy, JQuery, unittest, VSCode, Git, GitHub, Bootstrap

**ML / Data Science Tools:** pandas, NumPy, Sci-Kit Learn, XGBoost, SHAP, Databricks SQL, Tensorflow, statsmodels, mlxtend, matplotlib, seaborn

## SOFTWARE ENGINEER EXPERIENCE

### Software Engineer Intern

Dec. 2023

Rhythm School

San Francisco, CA (Remote)

- Designed and developed an announcement notification feature in Django and PostgreSQL to allow staff to post notifications to subsets of students in the student information system, which is licensed to external customers.
- Built a new admin UI for performing CRUD operations on the announcement data model that matches the workflow of existing admin views for a seamless UX.
- Maintained 100% code coverage for all new features.
- Designed and built a prototype mobile app homepage for the system, including user authentication and screen navigation, using React Native for cross-platform compatibility.

## TECHNICAL PROJECTS

### Job Posting App

[Live Demo](#) | [GitHub \(Frontend\)](#) | [GitHub \(Backend\)](#)

- Built a RESTful backend in Express with JWT-based authentication, request body validation with JSON Schema, and 100% test coverage including unit and integration tests.
- Designed and developed a React frontend with maintainable, modular components.
- Used Bootstrap CSS and Reactstrap styled components to achieve a consistent, professional look-and-feel on mobile and desktop.

### Message Sharing Social Media App

[Live Demo](#) | [GitHub](#)

- Built a Twitter-like multi-page application using Flask for ease of development and to minimize dependencies with 95% test coverage.
- Implemented user authentication and authorization via session management and bcrypt password hashing to allow for personalized follows and secure account management.
- Designed and implemented a data model for storing users, follows, likes, and messages in a PostgreSQL database, using the SQLAlchemy ORM to perform CRUD operations in an OOP manner.

### Image Storage and Editing App

[Live Demo](#) | [GitHub \(Frontend\)](#) | [GitHub \(Backend\)](#)

- Designed and built a photo storage and editing web application from scratch with a Flask backend to leverage Python's Pillow library for photo manipulation and editing.
- Persisted image files in an AWS S3 bucket for hands-free versioning, and to serve them without needing to transfer data to the frontend.
- Stored each image's EXIF metadata in a PostgreSQL database to allow the user to search for photos by fields like camera brand and model.

## ADDITIONAL WORK EXPERIENCE

### Data Scientist

Aug. 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.
- Collaborated with a software engineer to put the aforementioned unsupervised algorithm into UAT and production, owning post-production maintenance of the service including training new users and incorporating user feedback for ongoing algorithm improvements.
- Used Tensorflow LSTM neural networks and the SHAP explainability approach in Python and Databricks to develop a method for finding top explanatory features of a time series trend to bring automated insights into the product.
- Presented the latest results of my work in biweekly sprint demos to our company's engineering org. to enhance cross-team collaboration.
- Wrote and maintained wiki-style documentation for each solution I developed.

### Data Scientist

May 2021 – July 2022

*Valence Consulting (now Kopius)*

*Bellevue, WA*

- Developed 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.
- Used Azure Databricks and Azure Data Factory to build and maintain ETL and ML pipelines for increased scalability, data versioning, and easy integration with ML development workflows.

### Data Scientist

Aug. 2018 – April 2021

*Hitachi Consulting*

*Bellevue, WA*

- Developed classification models in Python and R for detecting events in a video feed using classical ML methods for super-fast computational 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 a machine failure.
- Contributed data visualizations and original analyses to a Fortune 500 software company's monthly marketing performance reports to the Chief Marketing Officer and marketing VPs across three lines of business affecting the prioritization of millions of dollars of advertising spend.

## EDUCATION

### Rithm School

2023

Full Stack Web Development Bootcamp

### University of Puget Sound

2014-2018

Bachelor of Science, Physics, Summa Cum Laude

Tacoma, WA