



Patrick Dwyer

Data Scientist at Manifold Group with 2 years of software development experience. Hands on experience designing and developing robust software systems in AWS, Azure, and GCP. Strong knowledge of Python, Javascript, and SQL. Based in Saint Louis but open to hybrid positions.

Experience

Manifold Group: Data Scientist

October 2023 – Present

- Built CI pipeline for building and publishing back end machine learning and database management services as Docker containers to AWS ECR with GitLab
- Building database management and machine learning backend services in Python and Node.js as Dockerized applications
- Defined postgres database schema in relation to machine learning model requirements and existing data pipeline constraints
- Developing real-time (<30 second response latency) streamed anomaly detection/forecasting models on time series data

Websanity: Web Developer

September 2023 – October 2023

- Freelance Web Developer for [Rulepop](#), an emerging rules reference platform for tabletop games
- Implemented search using [Fuse.js](#), page sharing using share api and dynamic title switching for all live rules references

Schwartz Lab: Lab Tech

July 2023 – Sep 2023

- Developed supervised 3d Convolutional Neural Network in PyTorch
- Set up extrinsic camera calibration routine by implementing [Levenberg-Marquardt](#) for [Bundle Adjustment](#)
- Extended PyTorch [torch.autograd.Function](#) class to integrate 3d→2d point projection into [autograd](#)
- Manually labelled 8,544 ground truth 2d points using self-made image labeling program

Manifold Group: Data Science Intern

July 2022 – March 2023

- Collaborated with head of data analytics to build a modular and extendable data pipeline in Python using Pandas and NumPy
- Visualized data for head of data analytics and partners using Matplotlib and Altair

Technical Skills

Languages

Python, SQL, Javascript, CSS, [SCSS](#), HTML, Bash(Unix shell)

Tools

Docker, ECR, Postgres (RDS), [Node.js](#), [npm](#), git, GitHub Actions, GitLab CI/CD, [Tower](#), Visual Studio Code, [Jupyter](#)

Libraries

[node:http](#), [node:fs](#), [Fuse.js](#), [NumPy](#), [PyTorch](#), [Matplotlib](#), [Pandas](#), [OpenCV](#), [Flask](#)

Education

BA: Mathematics, Computer Science

Sep 2019 – June 2023

Northwestern University, Evanston, IL — Weinberg College of Arts and Sciences — 3.43/4.00 GPA

Projects

[patrickdwyer.com](#)

Summer 2023-Present

- Responsive CV website built from scratch using no pre-built libraries and industry best practices