



Patrick Dwyer

Data Scientist at Manifold Group with 1+ years of software development experience. Experience in Software Development, Computer Vision, Time Series Modeling/Forecasting, and DevOps. Strong knowledge of Python, Javascript, and SQL. Interested in building software that improves the world at least a little bit. 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](#), [PySpark](#), [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