



Patrick Dwyer

Creative Data Scientist with a software engineering skillset. 1 year of professional software development experience. Math and Computer Science double major from Northwestern University. Experience designing and implementing quality machine learning and data products in a team environment. Dedicated to doing things the right way.

Experience

Manifold Group: Data Scientist

October 2023 – Present

- Designed and implemented real time physical sensor driven alert system in a team environment
- Utilized best practices for engineering software with Python and followed well established design principles, allowing the team and product to adhere to developing business requirements
- Created CI pipeline to integrate and store Dockerized machine learning application into existing AWS infrasture
- Translated and developed complex mathematical models into production application

Websanity: Web Developer

September 2023 – Present

- 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
- 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
- Set up extrinsic camera calibration routine by implementing Levenberg-Marquardt for Bundle Adjustment

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, EC2, ECR, PostgreSQL, git, GitHub Actions, GitLab CI/CD, Node.js, npm, Visual Studio Code, Jupyter

Libraries

NumPy, Pandas, sklearn, PyTorch, Matplotlib, Vega-Altair, OpenCV, Flask, node:http, node:fs, Fuse.js

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