



Patrick Dwyer

2023 Northwestern Graduate. Double major in Computer Science and Math. Passion for user-centric web development. Seeking full-time web development positions that will help me develop my technical and soft skills while providing value within a team. Based in Saint Louis but open to hybrid & remote jobs.

Technical Skills

Languages

Python, CSS, SCSS, HTML, C++,
Bash(Unix shell)

Tools

Clang, Tower, git/GitHub, GitHub
Actions, Visual Studio Code, Jupyter

Libraries

Node.js, NumPy, PyTorch, Matplotlib,
Pandas, OpenCV, Flask

Projects

patrickdwyer.com

Summer 2023-Present

- CV webpage built with HTML and SCSS, runs on an Apache Web Server

Story Painter (Class: [Practicum in Intelligent Information Systems](#))

Fall 2022

- Collaborated on a team of three people using agile methodologies to create a system that takes in a short story and outputs a picture book that fits the story
- Built as a web app using Python (Flask) for the backend and html/css/js for the frontend which utilized a fine-tuned OpenAI GPT-3 model in conjunction with DALL-E 2 to generate novel and relevant picture books

LLVM Compiler (Class: [Compiler Construction](#))

Fall 2022

- Built an LLVM→Assembly compiler in C++

Education

BA: *Computer Science, Mathematics*

Sep 2019 – June 2023

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

Experience

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