Matthew McAuley

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Education

Cornell University Aug. 2022 – Dec. 2025
Bachelor of Science in Computer Science *Ithaca, NY*

GPA: 4.16/4.3
Coursework: OOP & Data Structures, Functional Programming, Discrete Structures, Algorithms, Machine Learning, Database Systems, Digital Logic, Linear Algebra, Embedded Systems, Language & Information, Probability & Statistics

Technical Skills

Languages: Python, Javascript, Typescript, C#, Java, OCaml, C, Assembly, HTML, CSS, SQL
Tools: Git, GitHub, Docker, AWS, OCI, Redis, Snowflake, PostgreSQL, SQLite, Postman, npm, conda, Verilog
Libraries/Frameworks: .NET, NUnit, React, Expo, Flask, SQLAlchemy, NumPy, Pandas, PyTorch, Selenium

Experience

Software Engineer Intern June 2024 – August 2024
Octus (Formerly Reorg) *New York, NY*

- Developed C# API for retrieving and organizing CLO market data into multi-level tables each with unique insights
- Optimized data retrieval with Redis caching, reducing page load times from 5s to under 75ms after initial request
- Created NUnit integration tests with complete coverage, ensuring proper functionality after codebase changes
- Accessed Snowflake loan DB with 3.2M rows, adding relevant entries to objects defined by Postgres relationships
- Cooperated with product and front-end teams to implement and launch CLO website used by 35k clients worldwide

Software Developer August 2023 – May 2024
Cornell Cup Robotics *Ithaca, NY*

- Consulted major robotics company to design low-cost, educational robots for use in over 2,000 universities globally
- Collaborated with 30+ students across 4 subteams, with weekly scrum meetings and regular progress presentations
- Designed website with Flask backend allowing for wireless connection and programming of onboard microcontroller
- Implemented ReactJS GUI for intuitive pairing, movement, blockly coding, script writing, and location graphing
- Built overhead vision system using April Tags to track robot ID, location, and orientation relative to other objects

Projects

Exercise Engine

- Lead 5-person team in designing full-stack website for querying exercises and returning the most similar alternatives
- Created Flask API with SVD text mining and cosine similarity to measure relationships between descriptions
- Programmed HTML, CSS, and JS frontend allowing for API requests, applying filters, and neatly displaying results
- Used Selenium to web-scrape JSON dataset and Docker to containerize for deployment on an AWS EC2 instance

GymBuddy

- Fitness companion mobile app with rest timer, set counter, exercise display, and custom workout plan creation
- Developed UI using Expo, React Native, TypeScript, and Tailwind CSS, with Expo-Router for file-based navigation
- Implemented local storage of custom workout plans and exercises using SQLite database, enabling offline access
- Integrated Spotify Web API with OAuth2 for user authentication, providing seamless and intuitive media control

To-Do Manager

- Website for managing projects and their respective 'To-Dos', each with a title, description, priority, and due-date
- Constructed React frontend in Typescript with React Router for navigating between sign up, login, and home pages
- Built Flask API that interracts with the DB and handles user authentication using JWTs stored in browser cookies
- Designed SQLAlchemy DB for persisting user data and containerized app with Docker for hosting on OCI instance

Caml Capital

- Terminal recreation of the board game 'Monopoly' done almost entirely with functional programming in OCaml
- Worked in a 3-person team with weekly sprints and multiple prototype stages that offered increasing client value
- Utilized compilation units, higher order functions, OUnit test suites, version control, and rigorous documentation