Patrick Reilly

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Education

Cornell University, College of Arts & Sciences Ithaca, NY
Bachelor of Arts in Computer Science, Minor in Artificial Intelligence Expected May 2026

Related Courses: Introduction to Computing using Python, Object-Oriented Programming & Data Structures (Java), Calculus II, Discrete Structures, Functional Programming (OCaml), Computer System Organization & Programming (C), Introduction to Analysis of Algorithms

Experience

CUBRC Buffalo, NY
Software Engineer Intern June 2024-August 2024

- **Collaborated** with a team of 5 engineers on government contracts to develop software and perform integration testing with RESTful APIs, resulting in streamlined workflows and a 15% reduction in processing time.
- **Designed and implemented** test suites for data dissemination systems using **pytest**, increasing system reliability by 30% and ensuring performance standards were exceeded.

Project Experience

CoffeeConnect - Social Coffee Tracking Platform November 2024 – January 2025

- **Engineered** a full-stack web application with **Python/Django and PostgreSQL**, incorporating geospatial data handling through OpenStreetMap API for interactive activity mapping.
- **Developed and deployed** the platform on **Azure App Service** using CI/CD pipelines via GitHub Actions, integrating user authentication, real-time activity feeds, and responsive front-end design with Tailwind CSS and JavaScript.

Rowing Data Analytics Project September 2024

- **Designed and developed** a performance data parser for rowing team spreadsheets, automating data ingestion into a **PostgreSQL** database and reducing manual data entry time by 80%.
- **Deployed** analytics software to track and evaluate performance metrics for 30+ rowers, enabling real-time monitoring and strategic decision-making.

Natural Language Task Scheduler Project September 2024 – October 2024

- **Developed** a full-stack task scheduling application using **React**, **Node.js**, and **MongoDB**, incorporating natural language processing to parse and schedule tasks based on user input.
- **Integrated** chrono-node into the frontend to extract dates and times from natural language descriptions, improving task input efficiency by 50% and enhancing overall user experience.

Functional Programming Projects January 2024 – May 2024

- **Implemented** an **OCaml-based** table-driven data structure to process and analyze large CSV datasets, improving query speed by 25%.
- **Co-developed** a terminal-based library management system in **OCaml**, leading UI design and backend integration, resulting in a 40% reduction in data retrieval times.

Technical Skills

- **Programming Languages:** Python, Java, OCaml, C, JavaScript, SQL, HTML/CSS,
- **Frameworks & Tools:** React, Node.js, Express.js, Git, GitHub, Docker, Linux, PostgreSQL, MongoDB, Django, Pandas, TensorFlow
- **Methodologies:** Object-Oriented Programming (OOP), Functional Programming, RESTful APIs, Test Automation (**pytest),** Azure

Extracurricular Activities

Cornell University Varsity Lightweight Rowing Team Ithaca, NY

- **Dedicated** 20+ hours weekly to rigorous training and competitions, enhancing teamwork, leadership, and time management skills in a high-stakes environment.

Big Red Leadership Institute Ithaca, NY

- **Engaged** in regular leadership seminars to foster skill-building in communication, team management, and strategic decision-making as one of two team representatives selected.

Skills and Interests

Language Skills: Proficient in Spanish, Intermediate Portuguese
Interests: Solving New York Times crossword puzzles, restoring and modifying Cars, making espresso, and learning languages.