Sawyer Pollard

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EDUCATION

Amherst College, Amherst, MA **Expected May 2024**

- *Prospective Bachelor of Arts in Physics and Computer Science*
- GPA: 3.90/4.00
- Relevant Coursework: Data Structures, Linear Algebra, Oscillations and Waves (Teaching Assistant), Multivariable Calculus, Electromagnetism, Modern Physics, Truth-functional Logic

EXPERIENCE

The Amherst Student, *Digital Director*, Amherst, MA **September 2021 - Present**

- Architected a new website for the nation's oldest weekly college newspaper
- Improved page speed, SEO, and mobile experience, contributing to a 2x increase in monthly visitors
- Manages a team of student designers and developers through weekly one hour meetings to optimize the web experience

Hanneke Ion Trap Lab, *Researcher*, Amherst College, MA **June 2021 - July 2021**

- Designed ultrahigh vacuum control software using RS-485 serial communication and **LabView**
- Validated wavemeter accuracy with laser spectroscopy of hyperfine transitions in potassium-39
- Optimized and fabricated three unique photodiode circuits for high-power lasers of various wavelengths

IBM Thomas J. Watson Research Center, *Researcher*, Yorktown Heights, NY **July 2019 - September 2019**

- Assisted the OpenScale team design novel ways to explain machine learning models to end-users
- Engineered Xplain, a model agnostic system for generating contrastive AI explanations, in **Python**
- Employed a **Monte Carlo simulation**, data normalization, and multi-dimensional distance to help users better understand the predictions of computer models

IBM Watson Astor Place, *Researcher*, Astor Place, New York, NY **June - August, 2017 and 2018**

- Worked alongside the Watson team to disambiguate numeric entities in question-answer interactions
- Used **Python** and Stanford's **CoreNLP** to filter thousands of Reddit comments by generating parse trees
- Generated and annotated a training set of question-answer Reddit comments for use in improving named-entity recognition in machine learning algorithms
- Implemented IBM's Watson Assistant in Twitch via **Node.js** and the Internet Relay Chat protocol
- Developed a conversation tree and **MongoDB** system that allowed users to send tips to streamers

PROJECTS AND SKILLS

MineWeather **February 2021**

- Developed a Chrome Extension in **JavaScript** that dynamically adjusts the New Tab page based on the current weather
- Asynchronously queries the OpenWeather API and Geolocation API to display a scene from Minecraft based on eight different weather conditions
- Received **60,000+** likes on Reddit and Instagram; has over **8,000** active users and **80** five-star ratings
- Manages an active development community on GitHub

Hyperpuzzle **January 2021**

- Built a desktop application of three logic puzzles and solvers implemented in **Java**'s Swing GUI framework
- Employs a **depth-first recursive puzzle solver**, an intuitive class hierarchy, and game loading from files
- An intuitive user interface, help pop-ups, and error checker make the games easy to learn and play

General Software Skills: **Proficient:** Java, Python, Git, Linux (CentOS, Ubuntu Server), Remote Server Management, Mathematica; **Working Knowledge:** Docker, Maven, Numpy

Web Development Skills: **Proficient:** Modern JavaScript, TypeScript, HTML, CSS, Webpack, React, TailwindCSS; **Working Knowledge:** Node.js, Express, Hapi, GraphQL, MongoDB, Redis