

Miles Newland
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Education

University of Pittsburgh

School of Computing and Information
Bachelor of Science in Computer Science
Major: Computer Science | Minor: Physics

Pittsburgh, PA
Class of 2025
GPA: 3.238

Experience

University of Pittsburgh

Undergraduate Teaching Assistant

Pittsburgh, PA
Aug 2023-Present

Assists in the following courses: Intro to Computer Programming, Intermediate Programming, and Algorithm and Data Structures

- Leads engaging labs and recitations, honing not only technical skills but also fostering public speaking experience
- Utilizes strong communication skills for clear one-on-one interactions and group presentations
- Maintains regular office hours, offering dedicated support and addressing student questions

The Exchange

Customer Service Specialist

Akron, OH
May 2023 – Aug 2023

- Offered personalized guidance to customers, tailoring recommendations for video games, consoles, and accessories to meet their unique preferences and budget constraints

Crave

Server Assistant

Akron, OH
May 2022 – Aug 2022

- Provided excellent customer service, supported kitchen and waiting staff, and resolved customer complaints in a prompt and professional manner

Key Skills

Programming Languages:

- C, Java, Rust, Python (including Flask, Pandas, and NumPy), SQL, JavaScript, HTML, and CSS

Technical Expertise:

- Version control systems (Git and GitHub)
- Artificial Intelligence and Machine Learning
- Proficient in building dynamic and responsive web designs and experience with client-side scripting using JavaScript
- Familiarity with AJAX for asynchronous web interactions

Projects

Auto-Complete Engine

- Implemented the back-end of an auto-complete engine, utilizing a Trie structure to recommend words based on user history
- Showcasing skills in data structure implementation, algorithmic design, and Java

Color Quantizer

- Developed a Java program for color quantization using k-means clustering
- Applied the k-means algorithm to analyze and quantize the color palette of .bmp files
- Showcasing skills in image processing, algorithmic clustering, and Java

Wealth and Income Inequality Analysis

- Executed a comprehensive analysis of wealth and income inequality in the Pittsburgh area using Pandas
- Leveraged data manipulation and analysis techniques to provide insights into socioeconomic disparities
- Showcasing proficiency in data science and Python

Fast Food Order System:

- Developed a Flask server API simulating a fast-food order system
- On the customer side, implemented features allowing users to select items from an on-screen menu, view a real-time order summary, input their name into the order, and receive a final order summary page
- On the kitchen side, created a screen displaying current unprocessed orders and a button for order deletion upon delivery
- Showcasing skills in: HTML, CSS, JavaScript, DOM, HTTP requests, Python classes, Flask (routes, templates, models), and database CRUD operations

Awards and Certifications

- IBM: Introduction to Artificial Intelligence (AI)
- IBM: Machine Learning with Python
- Dean's List (Spring 2023)