

Jonathan Coulter

☎ 412-522-8277 • ✉ jonacoulter@gmail.com • in linkedin.com/in/jonathan-coulter- • 👤 joncoulter.github.io

EDUCATION

Bachelor of Science in Computer Science, *University of Pittsburgh*
Mathematics Minor, Economics Minor

April 2026

- **GPA:** 4.00
- **Relevant Coursework:** Data Structures & Algorithms, Web Development, Algorithm Design, Software Quality Assurance, Operating Systems, Systems Software, Computer Organization, Linear Algebra, Discrete Math

TECHNICAL SKILLS

Languages: Java, Python, C/C++, JavaScript, HTML/CSS, Rust, SQL, Swift

Frameworks: React, Flask, Node.js, Next.js, jQuery, JUnit

Libraries: pandas, Bootstrap, Material UI, OpenCV, SQLAlchemy, AutoGen, Matplotlib

Tools: Docker, Firebase, Git, Google Cloud Platform, Linux, Excel, Jupyter

EXPERIENCE

Software Engineer Intern – Carnegie Mellon University
Pittsburgh, PA

May 2024 – Present

- Designed and implemented the user interface of Sway, a chatroom web app aimed at depolarizing conversations through AI moderation, using Bootstrap and jQuery to transform it into a modern, responsive platform
- Engineered an administrative dashboard using Flask WebSockets and overhauled the corresponding database to utilize Firebase, enabling immediate modification of platform configurations and real-time monitoring of study metrics such as waiting room status and active chat sessions
- Presented Sway at CMU's Open Forum for Artificial Intelligence, where I connected with leading researchers in the field of AI to discuss the social and technical implications of these emerging technologies

Undergraduate Teaching Assistant & Peer Tutor – University of Pittsburgh
Pittsburgh, PA

Jan 2024 – Present

- Lead 25 students through recitation discussions and exercises to clarify Data Structures & Algorithms concepts
- Host office hours available to 150 students where I find unique explanations that cater to diverse learning styles, enhancing their grasp of programming assignments, practice exercises, and problem-solving techniques
- Engage students in individual and group tutoring for a variety of core computer science courses

Research Fellow – Center for Analytical Approaches to Social Innovation
Pittsburgh, PA

Aug 2023 – Apr 2024

- Leveraged Python, pandas, and Excel to gather and process unstructured data on the police-citizen complaint process from Allegheny County municipalities to create structured datasets for analysis
- Integrated this information into an interactive storymap, which now empowers the community by making the most recent police accountability data more accessible and actionable for residents of Allegheny County

Sales Associate – Old Navy
Monroeville, PA

Jul 2021 – Dec 2023

- Maintained a 2.5% credit card enrollment rate by effectively communicating with customers to address concerns and promote the benefits of loyalty/credit card programs
- Managed multiple tasks, including restocking, cashiering, and assisting customers during busy periods

PROJECTS

Echo – CMU TartanHacks
Pittsburgh, PA

Feb 2024

- Led full-stack development of a Flask web app integrated with the Spotify API and computer vision technology OpenCV and DeepFace to generate Spotify playlists of 20+ recommendations for the user based on their mood
- Created a RESTful API with Flask to handle user authentication, data processing, and interaction with APIs
- Trained an ML model with Sklearn and preprocessed 200+ songs with Pandas and NumPy to fine-tune recommendations

Side Quest – SheInnovates Hackathon
Pittsburgh, PA

Mar 2023

- Created an iOS app using Swift that assigns users a unique daily side quest in a category of their choosing that they must complete that day to promote adventure and spontaneity
- Developed profile and calendar features using SwiftUI to incorporate social networking in future development

Blink Buddy – Pitt CSC Hacks Award Winner
Pittsburgh, PA

Oct 2022

- Developed a Python application that utilizes real-time computer vision using OpenCV to detect and display information regarding user's blinking frequency and habits to improving ocular health
- Store and track user's blinking analytics over time to be compared across work sessions