

Yusen Peng

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EDUCATION

The Ohio State University, Columbus, Ohio
Honors B.S. Computer Science and Engineering, May 2026

Overall GPA (4.00 scale): **4.00**

SKILLS

Coding Languages: Proficient in Java, Python; Familiar with HTML, CSS, JavaScript, R, Power Fx, MATLAB
Libraries/Frameworks: ReactJS, Android, Pandas, NumPy, Matplotlib, Tkinter, Swing, JUnit
Operating Systems/Software: Linux/UNIX, VS Code, Android Studio, Eclipse, GitHub, Power App/Automate, LaTeX
Relevant coursework: software development and design, discrete structures, linear algebra, engineering statistics

WORK EXPERIENCE

The Ohio State University, Columbus, Ohio

Research Assistant, September 2023 – Present; part-time

- Collect, compile, clean, and analyze data related to flood exposure of affordable housing units in the U.S.
- Integrate Python programming, data analytics with ArcGIS; Test large-scale data at Ohio Supercomputer Center

The Ohio State University, Columbus, Ohio

Research Assistant, May 2023 – Present; part-time

<https://github.com/Yusen-Peng/SummerResearch2023>

- Developed benchmarks to compare CSV file I/O performance with HDF5, netCDF4, and Zarr
- Investigated the Blosc compression effect on file I/O performance among HDF5, netCDF4, and Zarr
- Explored HDF5 compound datatype and compared its file I/O performance to CSV with multiple read approaches
- Implemented multiple optimizations using dictionary and list in Python, Pandas, NumPy, Matplotlib.pyplot
- Tested by large-scale data under Linux environment on Lawrence Berkeley National Laboratory remote server
- Wrote and updated the research paper using LaTeX online editor in IEEE citation format

The Ohio State University, Columbus, Ohio

TA/Grader, August 2023 – Present; part-time

- Grade homework and projects for CSE 2221: Software Components for a class of 40 students
- Help students master data structures in Java, JUnit framework, and HTML in lab sessions and office hours

The Ohio State University, Columbus, Ohio

Lab Assistant, May 2023 – August 2023; part-time

- Collaborated in designing and developing a mobile application that helps students self-purchase machine parts
- Coded in Power Fx; implemented the automation between user interface and SharePoint using Power Automate

SOFTWARE PROJECTS

Resume Generator, June 2023 – July 2023

<https://github.com/Yusen-Peng/Resume-Generator>

- Developed a ReactJS application that generates a professional resume for the user within the website browser
- Implemented the following feature: adding dynamic number of entries into the different sections of the resume
- Coded in JavaScript, JSX, and CSS; Utilized ReactJS framework, useState hook and functional components

Career Consultant, May 2023

<https://github.com/Yusen-Peng/Career-Consultant>

- Developed a ReactJS application that helps students choose their career path by asking a number of questions
- Evaluated career path by the following dimensions: academic performance, family background, and extroversion
- Coded in JavaScript, JSX, CSS; utilized ReactJS framework, useState hook and map data structure

Optimal Route, October 2022 – April 2023

<https://github.com/Yusen-Peng/Optimal-Route>

- Developed an Android application that simulates the optimal route for students to visit multiple places on campus
- Implemented a graph searching technique: Dijkstra's algorithm; Applied Object-Oriented Programming
- Coded in Java with Android Studio Software; Utilized XML to design and build User Interface

LEADERSHIP

Engineer, Competitive Programming Club, February 2023 – Present

- Develop, test, and review coding problems in Java and Python for on-campus programming competitions
- Apply various data structures and algorithms: hash table, graph, greedy, sorting, searching (DFS/BFS)