

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

Front-end: React.js, Svelte.js; JSX, EJS; JavaScript, HTML, CSS, Tailwind CSS; Figma
Back-end: Express.js; MongoDB, Mongoose; JavaScript, Python, Java
Data analysis: Pandas, NumPy, matplotlib, PyGAD, Tidyverse, ggplot2; Python, R, MATLAB
Version Control: Git, Subversion Operating System: Linux/UNIX Coding editor: VS code, Eclipse

PROJECTS

Application Tracker, November 2023

https://github.com/Yusen-Peng/Application_Tracker

- Developed a full stack web application to keep track of job applications with job title, company, applied date, etc
- Implemented REST APIs using Express.js framework to perform common CRUD operations with applications
- Set up the database and designed the schema for both companies and job applications using MongoDB
- Utilized EJS (embedded JavaScript) and CSS to implement the front-end in a component-wise manner

EXPERIENCE

The Ohio State University, Columbus, Ohio

Research Assistant, October 2023 – Present

Machine Learning Research at Materials at Extremes

https://github.com/Yusen-Peng/AU23_ML_research

- Apply genetic algorithms in Python to predict the rupture time of materials based on various factors
- Utilize Python programming and PyGAD genetic algorithm library to generate and optimize equations
- Report updates via email every Monday and attend in-person meetings biweekly to address any questions

The Ohio State University, Columbus, Ohio

Club engineer, October 2023 – Present

- Collaborate in front-end design and development of a coding practice website for Competitive Programming Club
- Use Figma to help with design and utilize Svelte.js framework and Tailwind CSS to implement the front-end
- Attend officer meetings to help with weekly club meeting presentations and coding problems for coding contests

The Ohio State University, Columbus, Ohio

Research Assistant, September 2023 – Present

Data Analytics Research advised by Dr. Kelsea Best

https://github.com/Yusen-Peng/AU23_Data_Analytics_Research

- Analyze how natural disasters in U.S. are affecting people with different identities: gender, sex, sexuality
- Integrate Python (pandas, matplotlib) and R (Tidyverse, ggplot2) to implement data visualization
- Attend weekly Zoom meetings to report updates, ask questions, and do presentations regularly

The Ohio State University, Columbus, Ohio

Teaching Assistant, August 2023 – Present

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

The Ohio State University, Columbus, Ohio

Research Assistant, May 2023 – August 2023

File Performance Research advised by Dr. Suren Byna

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

- Developed benchmarks to compare CSV file I/O performance with 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