

Tianyi Zheng

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Education

University of Pittsburgh, Pittsburgh, PA Aug 2020 – Apr 2024
B.S. Computer Science and B.S. Statistics, Minors in Mathematics, Linguistics, and Chinese **GPA: 3.76/4.0**
• Relevant Coursework: Machine Learning, Computer Vision, Algorithm Design, Theory of Computation, Privacy Technologies, Data Structures & Algorithms, Data Science, Applied Regression, Probability, Mathematical Statistics, Stochastic Processes, Mathematical Logic, Computational Linguistics

Experience

Youngblood Photonics Lab, Pittsburgh, PA Dec 2022 – Present
Undergraduate Research Assistant
• Implement simulations of neural network models on analog photonic architectures using PyTorch
• Collect architectural metrics and implement various neural network training algorithms

University of Pittsburgh, Pittsburgh, PA Jan 2021 – Present
Undergraduate Teaching Assistant
• Develop, review, and approve practice assignments for students to reinforce lecture topics
• Teach recitations to review practice assignments and programming exercises

Amazon Web Services, Seattle, WA May 2022 – Aug 2022
Software Development Engineer Intern
• Worked as an intern on the Distributed Systems Engineering team for DocumentDB
• Set up release monitoring to facilitate software releases and decrease development time

Pitt English Language Institute Data Mining Group, Pittsburgh, PA Jan 2022 – Apr 2022
Undergraduate Research Assistant
• Conducted directed research as a member of a computational linguistics research group
• Organized, anonymized, and annotated over 100 GB of speech recordings of English learners

Projects

ESL Syntactic Analysis (Python, Pandas, Matplotlib, Seaborn) **GitHub:** bit.ly/3KcUzYI
• Analyzed the syntax of writing samples from English as a Second Language students to determine whether writing syntax varied by native language or English proficiency

PeopleSoft Bot (Python) **GitHub:** bit.ly/3Klb5Hu
• Developed and hosted a Discord bot to retrieve data from Pitt's student information system
• Provided Pitt students in multiple Discord servers with convenient access to course information

File Compressor (C++) **GitHub:** git.io/JR3QA
• Created a terminal app to compress and decompress arbitrary files
• Compressed files by up to 60% using a modified LZW compression algorithm

n -Gram Speak (Python) **GitHub:** git.io/Jivut
• Developed a terminal app to generate text that imitates given source material
• Constructed probabilistic n -gram linguistic models to generate novel text

Skills

Languages/Technologies: Python, R, Java, C++, Git/GitHub, MATLAB, SQLite, \LaTeX

Data Science: Data Visualization, Exploratory Data Analysis, Regression, Classification, Data Scraping
• **Python:** PyTorch, NumPy, Pandas, Matplotlib, Seaborn, SciPy, Scikit-learn

Activities

SteelHacks 2023 Hackathon — Planning Committee Organizer Dec 2022 – Mar 2023
She Innovates 2023 Hackathon — Planning Committee Organizer Dec 2022 – Feb 2023
Pitt SCI Academic Council — Student Representative Nov 2021 – May 2022
The Pitt Challenge 2020 Hackathon — 1st Place in Mobile Health Records Oct 2020