Zhifeng (Issac) Chen
Computer Science Student

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EDUCATION

University of California, Berkeley, *Computer Science, BA; Data Science, BA*   Aug 2021 — May 2025
GPA: 3.73
Efficient Algorithms **(CS170)**; Compilers **(CS164)**; Database Systems **(CS186)**; Data Structures **(CS61B)**; Machine Structures **(CS61C)**; Principles and Techniques of Data Science **(DATA100)**; Discrete Mathematics and Probability Theory **(CS70)**; Multivariable Calculus **(MATH53)**; Linear Algebra **(MATH54)**

SKILLS

Programming	Java, Python, C, C++, Swift, Git, Docker, Kubernetes, Web Scraping, SIMD, OpenMP, OpenMPI, OCaml
Data Science	Tensorflow, Scikit Learn, Pandas, SQLite, mySQL, MongoDB, Regular Expressions
Web Development	React.js, Node.js, Flask, HTML/CSS, JavaScript, Markdown

EXPERIENCE

Software Engineering Intern   May 2023 — August 2023
Excermatic   *Shenzhen, CN*
- Developed data visualization tools using Seaborn and Pandas for an internal testing suite that monitors and records valid ranges for anti-theft security antennas for optimized product testing efficiency
- Collaborated with Excermatic's software team to prototype a user-facing Android App in Java. Wire-framed, coded, and tested implementations for personalizing settings for anti-theft products
- Experimented with integrating AI models to help classify RFIDs in tagged merchandise using Tensorflow. Drafted possible implementations and approaches for future use of AI in product operations

URAP Student Researcher   **Aug 2023 — Present**
Space Sciences Laboratory (UC Berkeley)   *Berkeley, CA*
- Rebuilt the official data visualization software used in the NASA MMS mission to accomedate satellite formation changes.
- Used Pandas, Seaborn, and PySPEDAS to manipulate and visualize vectorized plasma data.
- Built interactive GUI that automatically marks regions of significant change of Earth's plasma environment.
- Software will be used officially by NASA for 1000+ scientists working on the NASA MMS project.

Computer Science Course Staff   **Aug 2022 — Present**
UC Berkeley EECS Department / CS Mentors   *Berkeley, CA*
- Held weekly sections to tutor students on lower division CS courses, mentored cohorts of first time tutors.
- Developed course website, compiled work sheets, hosted multiple exam review sessions and office hours.
- Taught Machine Structure (CS61C), Data Structures and Algorithms (CS61B)

Technical Co-Founder   **Nov 2022 — Present**
Peer Rising   *Berkeley, CA*
- Created curriculum for a 1-week summer program to 15 high school students to explore AI and programming with 93% students reporting they feel more confident in technical skills and AI abilities after the camp.
- Developed 3 AI-focused technical projects and a course website containing slides, project, and labs.

PROJECTS

Flight Tracker Software   **Nov 2022 — Present**
- Built a flight tracker web application that shows additional technical information for aviation enthusiasts.
- Implemented k-nearest neighbor algorithm with built-in SQLite database to recommend interesting aircraft to users.
- Backend obtains live flight info from AeroAPI; built frontend using React.JS, scrapes aircraft images with BeautifulSoup.

Machine Learning Email Filter   Feb 2023 — Apr 2023
- Implemented a Feedforward Neural Network using Tensorflow's Keras framework to filter spam and phishing emails.
- Neural Net included 3 layers and 257 nodes to achieve 99.7% accuracy.
- Performed data cleaning, fine-tuned neural net architecture to achieve 99.7% accuracy.

Parallelism   Mar 2023 — May 2023
- Used thread, data, and program level parallelism libraries and additional optimization techniques to improve performance of convolution operations up to 10x.

Gitlet   Apr 2022
- Built the version control software Gitlet from scratch, mirrors 18 commands of Git.
- Stored files in customized graphs data structures. Implemented Dijkstra's Algorithm, and Breadth First Search.

ACTIVITIES & INTERESTS

TEDx Speaker, Computer Science Mentor, CS61C Course Staff, Pilot, Airplane and Car Enthusiast, Photographer, Outdoor Enthusiast