# Alex Zhang

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## Stanford University                                  GPA: 4.15 / 4.0

**B.S. Candidate:** Computer Science (track: Artificial Intelligence)            *2021—2025*

**Relevant Coursework:** CS107: **Computer Systems**, CS 109: **Probability in CS**, CME193: **Scientific Python**, CS142: **Web Apps**, CS193X: **Web Programming**, MATH51: **Lin. Algebra & Multivar. Calculus**

## Technical Skills

**Python3; JS; HTML; CSS; OOP Design; Data Structures & Algo; JQuery; R; C; Git; LaTeX; Figma**

## Professional Experience

### Stanford Openproof Software—Full Stack Web Development Intern            *Mar. 2022 — Present*

- Architected & implemented **undo-redo infrastructure (HTML, CSS, JS)** with action consolidation and file-specific memory, serving 4 courseware applications used by universities in 5 countries
- Achieved a **6.7% reduction in lines-of-code** after conducting repository-wide consolidation of common Controller components and general streamlining based on **OOP (object-oriented programming)** principles
- Designed & implemented goal constraints modal; collaborated on general design tasks
- Collaborated with **a team of 5** engineers; managed **JIRA tickets**, attended **daily standup**, as part of agile dev

### Google—Data Operations                                           *Mar. 2022 — Present*

- Curated, refined, and completed **Python3 translation** of 100s of STEM problems used to train and evaluate the *Minerva* deep learning model for education
- Contributed to *Minerva*'s double-digit accuracy improvements over state-of-the-art models on graduate-level quantitative tasks

### Stanford Schiff Dorm—Residential Advisor                            *May 2022 — Present*

- Manage dorm for 90+ freshmen; allocate $64000 budget, plan overnight trips, responsible for public health and safety, create programming to uphold Diversity, Equity, Inclusion initiatives, monitor and maintain facilities

### Memphis Junior Science Association—Co-director, Founder                 *Sept. 2019 — Present*

- Oversee curriculum development, finances, logistics of 3 outreach programs & 11 events with activities in 6 states; reached 4000+ individuals via 450+ hours of community service
- Managing Youtube channel (12,000 views and 520 hours of watch time), collaborating with 4 video creators to ensure high quality, educational relevance, and on-time upload
- Designed and currently maintaining ([memphisjrscience.weebly.com](https://memphisjrscience.weebly.com)) with >20,000 lifetime page views

### PIXEL—Lead Programmer                                          *Jan. 2016 — May 2017*

- Partially implemented and maintained Git version control for an **AI-based application** using a **Java committee machine** to extract critical data from medical documents
- Collaborated with a former CTO of IBM and MIBIO, a local medical startup

## Selected Projects

### Explicit-free-list Heap Allocator (C):

- Implemented `malloc()`, `realloc()`, `free()` using best-fit search to achieve 93% utilization

### Generating Netflix movie rating predictions with machine learning (Python3):

- Implemented a naive bayes and logistic regression classifier in Python without machine learning libraries to analyze viewing patterns and predict Netflix users' movie ratings

## Academic Clubs

- Stanford Association for Computing Machinery, Stanford Student Space Initiative