ALEX ZHENG

Computer Science Major

alex.htzheng@gmail.com

(240) 751-7540

Frederick, MD

https://tinycv.co/az

EDUCATION

University of California, Los Angeles

Samueli School of Engineering – Computer Science

September 2023 – June 2026 (Expected)

Los Angeles, California

GPA: 3.929

Junior Class Standing

Urbana High School

International Baccalaureate Diploma Recipient

September 2019 – May 2023

Urbana, Maryland

GPA/WGPA: 4.0/4.8831

SKILLS

Python	C++
Java	SQL
Amazon Web Service	Google Firebase
Git / GitHub	Linux
HTML / CSS	Django
React / React Native	Bootstrap
JavaScript	Node.js
Modeling	Simulation

COURSEWORK

Intro to Computer Science (C++)
Data Structures and Algorithms (C++)
Calculus of Several Variables I & II
Linear Algebra and Applications
Introduction to Discrete Structures
Statistics

AWARDS

01/2023

Maryland State National Merit Finalist

Advanced to Finalist standing in the National Merit Scholarship Program of 2023

03/2023

MATHCOUNTS Competition Series State Certificate of Achievement

Awarded for exceptional commitment and outstanding achievement in fostering excellence in mathematics as the Head MATHCOUNTS Coach from Urbana Middle School

WORK EXPERIENCE

National Institute of Standards and Technology (NIST) - Center for Neutron Research (NCNR)

SHIP Software Developer Intern

June 2022 – August 2023 | Gaithersburg, Maryland

- Fulltime 40hr/week intern for 16 weeks during the summers of 2022 & 2023 and non-contiguous work during the 2022-23 school year at NIST.

Summer 2022:

- Enhance and expand the Python program SasView to facilitate analysis of Small Angle Neutron Scattering (SANS) data by integrating functionality to calculate and graph Beta(Q) values and the Radius of Gyration of samples.

Summer 2023:

- Developed a SANS model generation program in C with GPU utilization that accurately and efficiently simulated the SANS patterns of anisotropic proteins, conserving very limited neutron beam time on NCNR instruments.
- Calculate the structure and interactions between proteins in solution by comparing the simulated pattern to the scattering patterns obtained from real-world neutron scattering in the NCNR SANS instruments.
- Utilized multithreading to boost computational speed while maintaining the responsiveness of the graphical user interface (GUI).

Projects

tinyCV.co

Creator & Project Lead

- AWS based site that provides a simple and professional domain name for clients to create and share their own personal websites on their resumes.
- Hosted on Amazon Web Services (AWS) running an Ubuntu/Linux server with a Nginx reverse proxy from Django port 8000 to HTTP/HTTPS ports 80/443.
- Obtained Amazon issued HTTPS/SSL certificate enabling encrypted connection.
- Delivered client analytics using Google Analytics integration.
- As Project Lead, managed a cross-functional team, strategically assigning tasks based on team members' strengths. Furthermore, leveraged GitHub for efficient team collaboration and developmental workflow.

SureFashion

Creator

- Built a responsive Django web-application designed to allow users to curate wardrobes, explore outfits, and experiment with styles.
- Traditional user authentication and encryption combined with integrated OAuth2 using Google Cloud Authentication & Credentials API.
- Employed an SQLite database for efficient data management and storage.
- Utilized the Serply REST API to incorporate Google Image search functionality.

FitTogether – UCLA Creative Labs

Developer

- Cross-platform fitness app utilizing the spaCy machine learning model to match like-minded individuals based on their fitness preferences and foster inclusivity.
- iOS and Android apps simultaneously built using React Native and Node.js
- Managed user data and traditional authentication securely using Google Firebase & integrated Oauth2 using Google Cloud Authentication