

# Charles Zhu

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## Education

<b>University of California, Los Angeles (UCLA)</b> GPA: 3.81 (Dean's Honors)   B.S. in Computer Science	Expected Graduation: June 2026 Los Angeles, CA
<ul style="list-style-type: none"><li><b>Activities:</b> ACM Dev Team (Officer), Projected Dance (Director), Foundations Choreography (Events Chair), UCLA SwabSeq Lab, UPE Honor Society, Association of Chinese Americans</li><li><b>Relevant Coursework:</b> Operating Systems, Algorithms and Complexity, Theory of Computing, Software Construction, Digital Systems, Computer Organization, Data Structures, Multivariable Calculus, Linear Algebra, Discrete Mathematics</li></ul>	

## Monta Vista High School

GPA: 4.0

August 2018 – June 2022  
Cupertino, CA

## Experience

<b>Meta</b>   PHP, GraphQL, React, Python, SQL, Swift, Kotlin	June 2025 – September 2025
<b>SWE Intern</b>	Menlo Park, CA
<ul style="list-style-type: none"><li>Built Facebook advertiser onboarding tool to monitor eligibility criteria for new features, saving 200+ total hours/month</li><li>Led business logic changes and funnel metrics view for ongoing ad product experiment, analyzing 400k+ impressions</li><li>Facilitated design and implementation of GraphQL event migration, consolidating code across WWW, iOS, and Android</li></ul>	
<b>Microsoft (via Centific)</b>   JavaScript, HTML/CSS	June 2024 – September 2024
<b>SWE Intern</b>	Redmond, WA
<ul style="list-style-type: none"><li>Developed and implemented legal electronic data collection automations in nine Microsoft eDiscovery environments</li><li>Integrated daily scheduler for automation scripts into CI/CD pipeline to optimize deployment processes</li><li>Taught daily workshops for 10+ students on topics including HTML/CSS, JavaScript, SQL, and algorithms</li></ul>	
<b>UCLA SwabSeq Lab</b>   Python, Rust	February 2024 – September 2024
<b>Researcher</b>	Los Angeles, CA
<ul style="list-style-type: none"><li>Analyzed DNA sequences of 100+ patients to predict viruses present throughout genomes</li><li>Identified likely contamination between samples using Somalier and eliminated impurities using sample pair visualizations</li><li>Incorporated output into overarching Rust sample workflow involving pre-processing, alignment, and variant-calling</li></ul>	
<b>Native English Institute</b>   TypeScript, React, MySQL, Docker, Kubernetes	June 2023 – August 2023
<b>SWE Intern</b>	Kobe, Japan
<ul style="list-style-type: none"><li>Built scheduling algorithm to match 100+ student appointments with teachers per day based on priority, preferences, etc.</li><li>Restructured teacher ranking system and integrated logic into algorithm/database, saving 10+ hours/week of admin time</li><li>Conducted regular cron job tests using Docker and Kubernetes to ensure algorithm accuracy and reliability</li></ul>	
<b>ACM Dev Team</b>   TypeScript, React, Next.js, Node.js, MongoDB	November 2022 – June 2025
<b>Officer</b>	Los Angeles, CA
<ul style="list-style-type: none"><li>Developed template for automated site generation used by ACM committees and viewed by thousands of members</li><li>Refactored MongoDB events database and redesigned user interface for membership portal with 100+ users</li><li>Led architecture migration from React to Next.js for ACM archive project with student learning modules</li></ul>	

## Projects

<b>Genomic Histone Overlap Predictor</b>   Python	February 2024 - March 2024
<ul style="list-style-type: none"><li>Implemented a Hidden Markov Model to predict overlaps of 500,000 genomic DNA intervals with histone marks</li><li>Used Baum-Welch expectation-maximum algorithm to improve matrix parameters and refine model accuracy</li></ul>	
<b>Four-Year Course Planner</b>   TypeScript, React, Express, Node.js, MySQL, Firebase	September 2023 - December 2023
<ul style="list-style-type: none"><li>Designed user interface with drag-and-drop courses and notes for four-year plan using React/TypeScript</li><li>Stored data and major requirements in MySQL database and created API endpoints with Express</li><li>Integrated Firebase authentication with frontend and database for user profiles</li></ul>	

## Relevant Skills

**Languages:** fluent in Python, Java, PHP, GraphQL, C, C++, HTML/CSS, JavaScript, TypeScript, SQL; proficient in C#, Rust  
**Technologies/Frameworks:** Flask, React, Express, Node.js, Next.js, MySQL, MongoDB, Firebase, Docker, Kubernetes, PyTorch  
**Spoken Languages:** English (native), Chinese (fluent)