Shiwei Chen

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Education

De Anza College - B.A, Mathematics and Computer Science   Exp. May 2025
- **Transfer Coursework:** Data Structures, Assembly Languages, Linear Algebra, Discrete Mathematics, Multivariable Calculus
- **Upper Division Coursework:** Measure Theory (Graduate), Probability Theory, Complex Analysis (UC Berkeley, Real Analysis
- **Other Coursework:** Stanford Machine Learning ✎ Deep Learning Specialization ✎ AWS Solutions Architect Certification ✎

Experience

Heimdall Data - Software Developer Intern - Los Altos, CA   Aug 2023 - Present
- Developed automatic dependency checks for the Heimdall proxy, helping Heimdall Data to upgrade from Java 11 to Java 17.
- Redesigned GUI & backend of virtual databases, reducing virtual database initialization time by 50% for users.
- Implemented login history functionality in Spring & Angular, improving application experience for >13 clients.

ZoneUp - Contract Software Engineer - San Jose, CA (Remote)   Apr 2023 - Jul 2023
- Collaborated with UX Designer and Product Manager to develop a responsive full-stack landing page application from Figma prototypes using AWS, React, Express.js, and PostgreSQL. ✎
- Increased site reliability of ZoneUp application by configuring auto scaling for Docker images based on site traffic.
- Automated deployment to development and production environments through Github Actions and Jenkins.

Freelancing

Good Work Hub - Software Developer - Remote   May 2023 - Jul 2023
- Constructed testing suite and deployment pipeline for staging environments via Github Actions and DigitalOcean.
- Developed payments & donations functionality by integrating Stripe Payments API into Django backend.
- Enforced company-wide code quality by configuring linters and testing procedures for company web apps.

Django Software Foundation - Open Source Contributor - Remote   Mar 2023 - May 2023
- Optimized count() and exists() QuerySet calls in the Django Object Relational Mapper by removing extraneous SQL inner join commands, reducing processing time for unfiltered count and exists queries by up to 90%.
- Improved the Django administrator interface by modifying CSS @media queries to correctly scale on small-width devices.

Bay Coding Club - Competitive Programming Coach - Remote   Jun 2022 - May 2023
- Coached students for the USA Computing Olympiad (USACO) in Java/C++, helping 5 students promote from bronze to silver division and 1 student to the gold division by teaching graph traversal algorithms, union find data structures, and recursion.
- Administered 4 web development and coding bootcamps, teaching 14 high school students HTML, CSS, and vanilla JavaScript by modifying proposed curriculums based on individual student skill level.

Projects

Teaching Site ✎   Apr 2023
- Delivered customizable teaching portal for students' programming classes, integrating JWT authentication and code editor. Project features an Express and PostgreSQL backend, and is hosted through AWS Lambda & RDS.

Digicache ✎   Feb 2023
- Mobile-friendly React application for geotagging and sharing photos using Google Maps API, created with a GraphQL back-end and MongoDB database. Configured deployment through Docker and AWS Elastic Beanstalk.

Flexbox ✎   Sep 2022
- Developed a city planning program in C++ that uses classical graph algorithms to determine points of congestion and potential failure points in city road networks. Project developed as a part of Los Altos hacks.

Awards

Google Foobar Invitation   Nov 2023
- Invited to & solved 9/9 algorithmic & mathematics challenges with Python and Java in Google's secret coding interview.

Major League Hacking Award   Oct 2022
- Awarded "Best use of CockroachDB" in Technica '22, the world's largest hackathon for underrepresented genders.

USA Computing Olympiad - Gold Qualifier   Jan 2022
- Competed in national computing olympiad, placing top 10% writing compute optimized algorithms in Java and C++