

Shiwei Chen

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Education

- Georgia Institute of Technology - M.S in Computer Science Dec 2025
Machine Learning Concentration - Youngest matriculated student in program history by age.
- University of California, Berkeley - B.A in Applied Mathematics Dec 2024
Computational Sciences Concentration - Graduating at age 18. 3.73/4.00

Experience

- Uncountable - Incoming Software Engineer - San Francisco, CA Jan 2025
- Heimdall Data - Software Developer Intern Aug 2023 - Feb 2024
- Improved customer Time-to-value (TTV) by simplifying virtual database setup GUI in Heimdall Proxy by introducing caching checks, resulting in ~50% fewer clicks to starting database initialization.
 - Corrected login history inaccuracies in application, achieving a ~50% increase in precision by refactoring authentication workflow through Spring Security and Angular and writing mock authentication tests in JUnit.
- ZoneUp - Contract Software Engineer May 2023 - Jul 2023
- Directly collaborated with cross-functional teams (UX Designer, CEO, CTO) on a full-stack landing page by writing 6,000 lines of code using React, Express, and PostgreSQL incorporating 3D models and animations. [\[site\]](#)
 - Designed a cost-efficient AWS Architecture to handle 2,000 monthly users using Lambda and RDS.
 - Introduced DevOps productivity tooling by automating CI/CD with AWS CodePipeline & configuring auto scaling EC2 instances with Elastic Beanstalk and Docker, reducing deployment & autoscaling time from 10min to <1 min.
- Good Work Hub - Freelance Software Developer May 2023 - Jul 2023
- Reduced deployment time of Good Work Hub applications from 10 min to 2 min and compute cost by ~40% by designing and developing a new CI/CD pipeline from the company codebase to a DigitalOcean droplet.
 - Implemented safeguards for code stability by configuring linters & test-runners for incoming PRs with GitHub Actions and documenting unit test & style guidelines in Confluence, increasing unit test code coverage by 50%.
- Django Software Foundation - Open Source Contributor Mar 2023 - May 2023
- Co-authored optimization effort for count() & exists() Queries in the Django ORM by writing ~200 lines to remove extraneous SQL inner join calls, reducing processing time for certain count and exists queries by ~90%. [\[PR\]](#)

Projects

- GenAI Scenery Creation with Stable Diffusion
- Latent Diffusion model fine tuned with LoRA to generate Miyazaki style background scenery. Model trained with Weights & Biases experiment tracking, data from BeautifulSoup web scrapes, and deployed on AWS EC2.
- Competitive Programming Teaching Portal
- In-house learning portal for when I was a programming teacher, integrating JWT authentication, Stripe Payments API, and embedded code editor. Built using Express and PostgreSQL, and hosted with AWS Lambda & RDS.
- Digicache Photo Sharing Platform
- React app that allows users to create and share pins at custom locations, created with Google Maps API, GraphQL & MongoDB. Project won a Major League Hacking Award at the Technica 2022 Hackathon.

Skills

Tooling: AWS, Docker, GH Actions; React, Express, MongoDB; PyTorch, Weights/Biases, HuggingFace, BeautifulSoup
Languages: Python, Javascript, Java, C++, SQL (MySQL, PostgreSQL), Matlab, R; Typescript, HTML, CSS.
Coursework: Data Structures, Machine Structures, Machine Learning, Linear Algebra, Discrete Math, Probability

Awards and Certifications

Machine Learning: [DeepLearning.AI Specialization](#) (2024) Cloud: [AWS Solutions Architect Certification](#) (2024)
USACO Gold Qualifier: ranked top 10% of 18k contestants by writing efficient algorithms in Java/C++.