Cynthia Chang

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Summary

Driven and ambitious individual possessing 3+ years of professional software development experience, with a concentration in client- and server-side scalable web applications and related technologies. Passionate about creating technologies to enhance the user experience. Additionally trained in public speaking, interpersonal leadership and mentoring techniques; and adept at collaborating in small- and large-scale groups.

Education

M.S. Computer Science (with Thesis), University of Southern California   Jan 2023 - Aug 2024

- Master's Thesis: "Reconstructing 3D Reconstruction: A Graphical Taxonomy of Current Techniques"
- *Courses:* 3D Animation & Simulation, Deep Learning, Analysis of Algorithms, Database Systems, Robotics

B.A. Computer Science, University of California, Berkeley   Aug 2016 - May 2020

- *Courses:* Computer Graphics & Imaging, Machine Learning, Artificial Intelligence, Efficient Algorithms & Intractable Problems, Discrete Mathematics, Computer Security, Principles of Data Science
- Relevant Project: Minecraft Water Shader - implemented the Blinn-Phong shading model in OpenGLSL & C++, on sampled environment textures and variable light which produced efficient, playable in-game renderings of water reflections and movement

Professional Experience

Charles Schwab & Co., Inc. – Remote / San Francisco, CA / Austin, TX
Specialist Software Developer   Aug 2022 - Aug 2023
Software Developer, Associate (NERD)   Sep 2020 - Aug 2022

- Promoted to Specialist for: consistently exceeding performance standards; efficiently upgrading legacy C# RESTful API code to consume a new database service; and proactively becoming the team's subject matter expert on our UI modernization
- Contributed to the successful launch of a new scalable web application with an effective and working proof-of-concept; mentored both onshore and offshore colleagues during key development cycles while exceeding individual contribution goals
- Demonstrated high-level independent work, and shared senior engineer responsibilities, including: development representation in cross-functional meetings, UI design technical spec translations, real-time code fixes, feature merging, peer reviews, and production release assistance
- Core member in the maintenance of legacy applications using Angular, HTML, and CSS/SCSS - improved the user interface experiences for over 40 million clients with over 10 unique page behavior tracks
- Collaborated effectively with colleagues in a CI/CD Agile environment using the Atlassian suite - providing valuable developer input to business partners and increasing the clarity of technical requirements in sprint planning, which decreased development completion time by 1-2 days in sprints
- Participated in new graduate program (NERD) recruitment and assisted hiring teams with coding interviews; provided feedback on final round candidates

New Student Services, University of California, Berkeley – Berkeley, CA
Student Coordinator   Sep 2018 - Sep 2019

- Developed a Python script to automate grouping of 9,000+ students, reducing manual work by 95%
- Collaborated with staff supervisor and campus partners to organize 7 off-campus excursions, designing a cohesive template for 140+ unique itineraries and serving as the liaison for all communication between venues, student leaders, and volunteers during the event week

- Increased recruitment of STEM student volunteers by 15%+ by exposing volunteer recruitment events to STEM-specific locations on campus. Surveys from newly admitted STEM students reported higher feelings of inclusion and representation in their orientation activities
- Planned, conducted, and improved upon large-scale matriculation seminars with a team of 4 co-Student Coordinators. Volunteer surveys reported improvement by 10%+ in seminar training length and usefulness

New Student Services, University of California, Berkeley – Berkeley, CA

Orientation Leader	Jan 2017 - Aug 2017
Orientation Mentor	Jan 2018 - Aug 2018

- Coached different groups of 10 students each throughout Mentor (and Coordinator) positions, providing leadership teaching skills and conflict support for 600+ volunteer student leaders
- Guided 40 new transfer students as an Orientation Leader on college resources in the inaugural Golden Bear Orientation week

Research Experience

M.S. Student – University of Southern California   May 2023 - Aug 2024
Advisor: Professor Saty Raghavachary

- Performed an extensive literature review of state-of-the-art research in computer graphics and deep-learning based 3D reconstruction methods; constructively organized 40 recent advancements as graphical taxonomies, each as a tree rooted in a different research objective
- Developed Bash scripts for data management and running high performance GPU cluster jobs
- Analyzed existing neural network algorithms for 3D mesh reconstruction and joint/pose predictions

Research Apprentice – University of California, Berkeley   Jan 2019 - May 2019
Supervisor: Dr. Qingkai Kong

- Fine-tuned machine learning algorithms for improved seismic wave analysis and earthquake predictions in the San Francisco Bay Area
- Automated data-cleaning procedures for seismic wave data with Python Pandas and ObsPy
- Developed parallel-processing functions for extracting data in Google Colab and Github repositories

Teaching Experience

CS61A Academic Intern – University of California, Berkeley   Aug 2018 - Dec 2018

- Supported 50 undergraduates with Python coding labs and theoretical material, including: data structures, object-oriented programming, recursion, inheritance; informally commended by several lab students for professionalism, clear teaching, easy-to-understand explanations

English Volunteer Teacher – Overseas Community Affairs Council, Taiwan   Aug 2015

- Taught a class of twenty 5-7 years old underprivileged/rural youth in Taiwan with self-created, beginner-level English language lesson plans, explaining in Mandarin Chinese when necessary

Other

Technical Languages: C/C++, C#, Python, Java, JavaScript/TypeScript, JSON, XML, HTML, CSS/SCSS, OpenGLSL, SQL, LaTex

Technologies: NodeJS, RESTful services, Object-Oriented programming, Pandas, PyTorch, CUDA, Atlassian (Jira, Confluence, Bitbucket), Linux, Windows, MacOS

Foreign Languages: English (*native*), Mandarin Chinese (*native*)

Interests: Piano, Horticulture, Motorsports, Climbing, Art