# Chuhui Han

(510) 697-7430 | chuhuihan@berkeley.edu | LinkedIn

## EDUCATION

**University of California, Berkeley** — **Berkeley, CA**
*B.A. Computer Science and Data Science* — *Dec 2025*

- **Relevant Coursework:** User Interface, Computer Security, Efficient Efficient Algorithms, Probability for Data Science, Operating Systems, Database Systems, Database Management, Computer Architecture (C, RISC-V), Data Structures (Java, Python), Artificial Intelligence, Discrete Math and Probability

## EXPERIENCE

**The Hong Kong University of Science and Technology** — **Clear Water Bay, HK**
*Summer Exchange Program* — *June 2023 – Aug 2023*

- Gained hands-on experience with relational databases through weekly labs and assignments using SQL.
- Designed and implemented a final capstone project to manage and match 300+ students to project groups led by 40+ faculty based on course and project preference.
- Wrote complex SQL queries to power user matching and group lookup logic; developed front-end with HTML/CSS for a clean and intuitive UI.
- Integrated query results into an existing JavaScript codebase by parsing query outputs and linking them to interactive UI components.
- Collaborated with peers to solve real-world database challenges, enhancing teamwork and adaptability.

**AUSD Collaborative Coding Club** — **Alameda, CA**
*Club Co-President* — *August 2019 – June 2021*

- Revitalized a dormant coding club, creating a community for students interested in enhancing their programming skills. Expanded by establishing a district-wide network, integrating all other coding clubs from the Alameda School District.
- Organized and facilitated weekly educational Zoom sessions, increasing participation by 70% over 1 year.
- Provided mentorship and mini-group sessions to further develop students' skills and answer questions.
- Coordinated with other schools' club presidents and faculty to secure resources and support, ensuring sustainability and growth within the network.

## PROJECTS

**Perceptrix** | React, Firebase, JavaScript, TensorFlow.js

- Collaborated in a team of 5 through the full product lifecycle to build a web app that recommends glasses based on face shape.
- Contributed to UI/UX design discussions and implementation to ensure a seamless and intuitive user experience, using Figma to mock up key interface components.
- Integrated Microsoft Azure's Face API to extract facial landmarks and classify user face shape, enhancing recommendation accuracy.
- Used TensorFlow.js to map eyes, nose, and other facial features for virtual glasses try-ons.
- Showcased the app at the Jacobs Design Showcase at UC Berkeley to 100-200 attendees, receiving highly positive feedback for its intuitive UI and seamless user experience.

**Football (Soccer) Analysis System** | Python, Ultralytics YOLO, Google Colab

- Built a video analysis system for real-time player and ball detection, using Python and Ultralytics YOLOv8.
- Applied k-means clustering to detect and group jersey colors and calculate key metrics such as ball retention (possession rate), player speed, and distance covered.
- Trained the model on 600+ frames of Bundesliga football games and later fine-tuned it on personal gameplay videos to generate individualized performance insights.
- Slowly adjusted the new model to minimize overfitting, enhancing model accuracy and adaptability to varying conditions (e.g. angles, lighting) using feature selection and better data labelling.

**Gitlet** | Java, J-Unit Testing, File I/O

- Implemented a simplified version control system emulating Git, including features like branch switching, merge conflict resolutions, and commit resets. Fostered proficiency in the principles of version control.
- Developed deeper understanding of graph and tree traversal algorithms (BFS, DFS, Dijkstra's) through hands-on experience with complex data structures allowing for replication of 10 different git commands such as init, add, commit, merge, branch, checkout, etc.
- Acquired extensive knowledge on the Java I/O system and Java file handling, as well as different debugging features through IntelliJ.
- Enhanced problem-solving skills through design and implementation of efficient algorithms for navigating and manipulating data structures.

## TECHNICAL SKILLS & INTERESTS

**Programming Languages:** Java, Python, C, RISC-V/x86 Assembly, SQL, HTML/CSS, JavaScript

**Tech Stack:** React Native, MySQL, Supabase, Flask, Vercel, Git, Docker, Valgrind, JUnit, CGDB

**Additional Skills:** Technical Documentation (Notion, LaTeX), Project Management, Figma Design, Analytical Writing

**Languages:** English (native), Cantonese (native), Mandarin (intermediate proficiency)

**Interests:** Sports Analytics (AI-driven performance analysis), Open Source Contribution