

# Tze-Chieh (Jay) Chou

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## EDUCATION

### University of California, Berkeley

Berkeley, CA

*Bachelor of Arts in Computer Science, Upsilon Pi Epsilon CS Honor Society (GPA 4.0/4.0)*

May 2024

- **Relevant Coursework:** Efficient Algorithms and Intractable Problems, Computer Architecture (Machine Structures), Introduction to Artificial Intelligence, Structure & Interpretation of Computer Programs, Data Structures, Discrete Mathematics & Probability Theory, Linear Algebra & Differential Equations, The Foundations of Data Science

## EXPERIENCE

### UC Berkeley

Berkeley, CA

*Web Development Intern*

Dec 2022 – Present

- Add and maintain current content on UC Berkeley Mobile App within the MODO platform, supporting custom features
- Ensure the implementation of back-end security measures and develop new functionalities in ExpressJS & Typescript

### PicCollage

Taipei, Taiwan

*Software Development Intern (Web)*

May 2022 – Aug 2022

- [[Groupful](#)] Built video upload & [compression](#) in Firebase Functions, updated UX using ReactJS, and improved SEO
- [[MixerChat](#)]
  - Developed and launched a breakout- and mobile-supporting video conferencing platform with Nuxt 3 and Vue 3
  - Designed and implemented invite-to-room and room-based text chat features with Firestore and Daily.co API

### Launchpad (UC Berkeley)

Berkeley, CA

*Machine Learning Developer*

Oct 2021 – Present

- [[Duet](#)] Built an audio genre interpolator based on a [VQ-VAE](#) paper to extract style & content info from audio files
- [[Reconstructor](#)] Trained various [NeRF](#) networks to generate 3D reconstructions using self-collected 2D images
- [Senseware] Built model to detect anomalies across time-series data using LSTM autoencoders & forecasting methods

### Sinlau Hospital Information Systems Office

Tainan, Taiwan

*Software Development Intern*

Aug 2020

- [Respiratory Therapy Log Project] Built desktop app that digitizes patient care records, retrieves and integrates values from machines and automates calculations using Visual C#, reducing work time by 250% for ten employees

### National Taiwan Normal University Robotics Lab

Taipei, Taiwan

*Lab Assistant Intern*

Jul 2019

- Learned and applied CNN and computer vision concepts, and implemented fuzzy control in C++ based on journals
- Reimplemented MATLAB precision control simulation code in C++, built helper functions for matrix calculations

## INDEPENDENT PROJECTS

### iHearU - Group Spotify Listening Habit Analyzer Game (Web)

Oct 2022 – Nov 2022

- Developed NextJS web application incorporating Spotify API to extract users' top tracks and analyze mutual songs
- Used Firebase and WebSocket to synchronize states across devices to facilitate multiplayer song-guessing experience

### [QuiConnect](#) - Social Media Linking App (Cross-Platform)

Oct 2021 – Nov 2021

- Developed iOS/Android app using React Native, incorporating third-party QR code scanner and generator libraries
- Devised UI allowing users to enter personal info and generate/scan code to connect with others on social media

### [MyGymBud](#) - Workout Tracking App (iOS)

Jun 2021 – Sep 2021

- Designed data models for storing fitness (weight/time) data that allow automatic unit conversions and comparison
- Incorporated SwiftUI components and third-party packages (SwiftUICharts/Sliders) to build app UI in XCode

## SKILLS, ACTIVITIES & INTERESTS

**Languages:** Python, Java, C++, Javascript, Typescript, PHP, HTML, PostCSS, SQL, Swift

**Technical Skills:** ReactJS, VueJS, Firebase, Netlify, Django, GitHub, Flask, PyTorch, NumPy, TailwindCSS

**Certifications & Competitions:** 2022 UChicago Trading (#3), Competitive Programming (#2 in City Competition)