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 2025
- **Relevant Coursework:** Introduction to Database Systems, Efficient Algorithms and Intractable Problems, Computer Architecture (Machine Structures), Introduction to Machine Learning, Introduction to Artificial Intelligence, Principles & Techniques of Data Science, Data Structures, Discrete Mathematics & Probability Theory

WORK EXPERIENCE

Verkada   **San Mateo, CA**
Software Engineering Intern   May 2023 – Aug 2023
- Designed PostgreSQL schemas and created API endpoints to support saving & modifying filter parameters on events
- Created a Kubernetes deployment with autoscaling concurrent pods to periodically generate CSV reports based on user-specified schedules, upload to AWS S3, & email the links to users, using Datadog metrics to monitor the service
- Incorporated Debezium to synchronize database changes between 2 services, devised DynamoDB schemas & indexes based on the access pattern, and leveraged Kafka topics and consumers to receive and process database changes in Go

UC Berkeley IT   **Berkeley, CA**
Web Development Intern   Dec 2022 – Jun 2023
- Built a full-stack NextJS app allowing users to report and view campus wifi strengths on a heatmap by crowdsourcing
- Added content on the UC Berkeley Mobile App through the Modo platform with JSON to support custom features

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 (Vue)
  - 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
- [Attune] Built model to detect anomalies across time-series data using LSTM autoencoders & forecasting methods
- [HiddenLayer] Experimented with various proxy models for pre-trained LLMs and generated adversarial examples

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 QR codes 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 & CERTIFICATIONS

Technical Skills: Python, Java, Javascript/Typescript, GoLang, C++, PostgreSQL, DynamoDB, Swift, ReactJS, VueJS, Firebase, Kubernetes, Terraform, Docker, GitHub, Flask, PyTorch, NumPy, Pandas
Certifications & Competitions: 2022 UChicago Trading (#3), Competitive Programming (#2 in City Competition)