Joanne (Chih-An) Tsai

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EDUCATION

Carnegie Mellon University
Aug 2020 – Dec 2023

B.S. in **Information Systems**

<u>Minors</u>: Human-Computer Interaction, Business Analytics and Optimization

<u>GPA</u>: 3.87, Dean's List with High Honors

<u>Relevant Coursework</u>:
Mobile App Design & Dev. *(in progress)*
Web Application Development *(in progress)*
Database Design & Development
Prin. of Software System Construction
Principles of Imperative Computation
Programming Usable Interfaces

SKILLS

Programming Languages

Swift, Objective-C, Java, TypeScript, Python, JavaScript, HTML/CSS

Frameworks

SwiftUI, UIKit, Bootstrap, Django, JQuery, ReactJS, Ruby on Rails

Database Management

PostgreSQL, MySQL, MongoDB

OTHER EXPERIENCE

CMU Women in Information Systems

Lead Mentor *(2022-2023)*

CMU Business Technology Group

Software Developer *(2021-2022)*

EXPERIENCE

Google, *Software Engineering Intern*, Seattle, WA
May – Aug 2023
- Re-designed and developed UI and data layers that are integrated across Google iOS apps such as Gmail, Maps, and Photos, using Swift and SwiftUI
- Applied the Redux Design Pattern to develop a full-stack prototype, cutting the original codebase by 75% (estimated)
- Collaborated with product managers and UX designers to integrate up-to-date internal design guidelines and refine user flows

Carnegie Mellon University, *Teaching Assistant*, Pittsburgh, PA
Aug – Dec 2022
- Mentored 15 students on database design, SQL, and MongoDB queries during weekly labs
- Assisted in refining user stories, conceptual models and functional dependencies, and debugging PostgreSQL queries during team projects

Google, *Student Training in Engineering Program Intern*, Taipei, Taiwan
May – Aug 2022
- Refactored and optimized a developer tool for Google Nest that is utilized across multiple camera products in C++
- Surveyed and integrated an open-source library API for video processing
- Performed software device testing and contributed to unit testing

CMU Human-Computer Interaction Institute, *Research Assistant*, Pittsburgh, PA
Feb – May 2022
- Migrated, visualized, and analyzed large-scale user data tables (1M+ records) using AWS, MySQL, BigQuery, and R
- Collaborated with online therapy platform 7 Cups to evaluate impact of online therapy on mental health outcomes through machine learning

PROJECTS

Memolounge
Sep 2023 – Present
- Developing an iOS app that aims to connect friends within distant friend groups through compiled friendship blogs with individual updates
- Implementing frontend and backend of the app using Swift, SwiftUI, and Firebase
- Ideating and designing 3 iterations of lo-fi and hi-fi wireframes based on user testing

Flight Data Visualization Framework
Apr – May 2023
- Crafted a black-box framework with 3 data and 3 visualization API plugins to process and display real-time flight data using Java and TypeScript, including an interactive GUI
- Performed domain analysis and created UML diagrams to select data sources and visual representations and to ensure extensibility and flexibility

Teedy Open Source Feature Development
Sep – Oct 2022
- Programmed 2 new features across front-end UI, data transmission, and back-end services using AngularJS, REST API, Java, and SQL for Teedy open source codebase
- Implemented CI/CD pipeline with GitHub Actions for efficient version control