

# Claire Tsui

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University of California, San Diego

Bachelor of Science in Mathematics (Applied)

Minor: Computer Science

Sept 2021- Mar 2025

## COURSEWORK

**Math:** Calculus, Linear Algebra, Statistics, Probability, Differential Equations, Mathematical Reasoning, Data Analysis, Optimization

**Computer Science:** Web Development, Data Structures, Computer Organization, Data Mining, Recommender System

**Technical skills:** Java, Python, C++, PHP, HTML, CSS, JavaScript, LaTeX, Matlab, RStudio, Bash

## WORK EXPERIENCE

### PetMap

San Diego, CA (Online)

Software Engineer (Front-end Developer)

Oct 2024- present

- Implement interactive Google map view using API, managing map initialization, customizing the map markers, and optimizing components for performance
- Develop and maintain scalable, responsive PetMap web utilizing frontend technologies such as HTML, Tailwind CSS, JS, and frameworks such as React.js
- Build reusable code and libraries to promote clean, modular, and efficient code, ensuring maintainability and flexibility for future development
- Conduct comprehensive testing and debugging of PetMap web to ensure smooth functionality across multiple browsers and devices, ensuring a seamless user experience

### Academia Sinica (Institute of Statistical Science)

Taipei, Taiwan

Research Intern

Jul 2024- Aug 2024

- Developed and conceptualized a research project under the Cancer Moonshot initiative, focusing on innovative strategies to target and analyze cancer-related biomarkers
- Conducted comprehensive correlation and integrative analysis between patients' gene expression levels and phenotypic traits, and identified key genetic markers
- Designed and generated detailed visualizations of research findings using R, including heatmaps for gene expression patterns, MA plots to assess differential expression, and volcano plots to highlight statistically significant genes

### OwlTing Group

Taipei, Taiwan

Full-stack Developer Intern

Jul 2023- Aug 2023

- Developed a dynamic blog website using PHP, incorporating features such as auto-complete search, user and post creation, tagging, commenting, and categorization to enhance user experience and functionality
- Built and styled the website with responsive and visually appealing interface using fundamental HTML and CSS
- Gained proficiency in Laravel, exploring its functionality and applying it to web development tasks, contributing to a deeper understanding of modern PHP frameworks
- Optimized the website by leveraging Laravel's functionality, which accelerated development time by 15% and enhanced backend efficiency

### Lianna Enterprise Corporation

Taichung, Taiwan

Research and Development Intern

Jul 2020- Aug 2020

- Prepared for the sample of cosmetics including shampoo, hair conditioner, and lotions ensuring high-quality standards for customer trials
- Formulated customized fragrances by testing 30 different types of fragrances, enhancing product appeal
- Optimized the placement and accessibility of chemical materials to improve operational efficiency

## ACTIVITIES

### Triple C (Chinese Computer Community)

UC San Diego

Public Relation

Feb 2023- Dec 2024

- Securing sponsors and establishing collaborations for club activities with other organizations, increasing sponsorship revenue by 25%
- Managing and operating official Weixin account, posting updates and feeds according to the club's schedule, which boosted follower engagement by about 40%

## SKILLS

**Languages:** Fluent in English and Mandarin, slightly understand Spanish and Korean

**Other:** Problem solving, time managing, and critical thinking skills