

# Howard Lung Hao Tung

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## WORK EXPERIENCE

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### Software Engineer | *Co-Diagnostics, Inc*

June 2024 – Present

- Built a cross-platform mobile application using **Flutter** and **Dart** to connect with a medical instrument via Bluetooth, incorporating **Hasura** for database interactions. Created three app variants for clinics, households, and doctors.
- Redesigned the demo user workflow to support offline functionality by implementing **SQLite** queries for storing approximately **100** critical data locally, enabling seamless offline analysis and experimentation.
- Addressed bugs and implemented new features, including dynamic locale-based updates, improved user search functionality (enhancing usability by **70%**), and managed **GQL** connections for data insertion and updates.
- Collaborated with a cross-functional team of approximately **11** members, including engineering, firmware and manufacturing.
- Develop and execute verification processes, produce comprehensive release documentation, and manage change orders required for successful software releases following established procedures.
- Research requirements, emerging software technologies, and strategize actions while working with leadership to implement better methodologies.

### Web Developer & User Experience Assistant | *J. Willard Marriott Library*

June 2023 – May 2024

- Proficiently resolve website-related issues reported by library employees using **Jira** project management software. This includes adding elements and editing pages, utilizing **WordPress** and **Omni CMS**.
- Implement custom **PHP** functions to enhance website functionality, resulting in improved user interactions and efficiency.

## PROJECT

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### **UBetterSurplus** – **Capstone Project** | *Web Application*

October 2023 – January 2024

- Developed a dynamic and efficient Web Application using **React**, **JavaScript**, **C#**, **Entity Framework Core** and **ASP.NET Core**, integrating a responsive and visually appealing user interface through **Figma** and **Fluent UI Design** principles.
- Established secure user authentication features with **JWT** (JSON Web Tokens) and **BCrypt**.
- Devised data extraction mechanisms using **Python** to retrieve approximately **600** real-time inventory data from the University of Utah surplus store's frequently updated PDF file, eliminating the need for manual searches. Extracted data is stored in **MySQL**.
- Utilized **DBML** and **Entity Relationship** (ER) diagrams to design and optimize the database structure, ensuring data integrity and efficient retrieval.

### **Graduation Points (GP)** – **Capstone Project** | *Mobile Cross-Platform Application*

October 2020 – May 2021

- Collaborated with **4** student researchers as the lead programmer and developed an application that helps students to find information regarding the graduation requirement (PCCU-Passport) efficiently.
- Utilized **Flutter** and **SQLite** as the local database; used **ChromeDriver** and **Beautiful Soup** in **Python** to capture .xlsx from the school website to convert to a clean .csv format and uploaded to **Firebase**.
- Designed the history function that allows users to record past activities and store photos, and the add-to-favorites function enables users to save preferred activities.

## EDUCATION

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### **MS. Software Development**

University of Utah | School of Computing

August 2022 – May 2024

GPA: 4.0 / 4.0

### **BS. Information Communications**

Chinese Culture University | College of Journalism and Mass Communications

September 2018 – June 2021

GPA: 3.75 / 4.0

## SKILLS & TECHNICAL TOOLS

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Java | JavaScript | C# | Firebase | Flutter | React | MySQL | Python | Kotlin | Dart | SQLite | HTML | CSS | Git | JSON | Figma | GraphQL | Jupyter Notebook | Adobe Premier Pro | Adobe After Effects CC