# Chien-Ying (Catherine) Yang

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## EDUCATION

**Master of Science (M.S.) in Computer Science**, Boston University        **Sep. 2022 – May 2024(Expected)**
- Relevant Coursework: Data Structure and Programming, Algorithms, Object Oriented Programming, Object Oriented Analysis and Design, Web Programming, Human Computer Interaction and Design

**Bachelor of Science (B.S.) in Engineering Science**, National Taiwan University        **Sep. 2017 – June 2021**

## TECHNICAL SKILLS

**Programming Languages**: Python, Java, C++ | **Databases management**: MongoDB, MySQL
**Web Development**: JavaScript, HTML/CSS, React | **iOS Development**: Swift, SwiftUI, Xcode
**Developer Tools**: Xcode, Git, Web Driver Agent, Android Debug Bridge, Google Chrome Extension
**Frameworks**: React, Node.js, GraphQL, Ant Design, Material-UI

## PROFESSIONAL EXPERIENCE

**Python Programming Teaching Assistant**, National Taiwan University        **Sep. 2021 – Jan. 2022**
- Taught a 2-hour course twice weekly with original tutorials and hands-on work to 800+ students, the largest university **Python** course in Taiwan
- Held individual office hours for 20+ students 3 hours per week

**Software Developer Intern**, ShopBack Co. Ltd.        **Feb. 2021 – July 2021**
- Cross functional collaboration with different functional teams to ensure the testing is rigorous and relayed to the appropriate engineering teams immediately
- Developed automated testing scripts using **Python** for 2 key projects, successfully improving team efficiency by 60% daily
- Utilized **Web Driver Agent** and **Android Debug Bridge** to perform automatic tests on ShopBack's iOS and Android application's search, log in and sign up functions

## PROJECTS

**Collaborative Bookmark Group Management Website Development** (Project Link)
- A web service allowing 50+ users to co-edit bookmarks groups in real-time
- Developed a front-end website with **React** and **Ant Design**
- Utilized **GraphQL** to communicate with the back-end API built with **Node.js** and stored data in **MongoDB**
- Developed a popup **Google Chrome Extension** with **React** and utilized **React cookie** to connect the extension tool with the web service

**Trip Together – Co-edit Trip Planning iOS Application Development** (Project Link)
- Developed a co-editing trip planning iOS App in **Swift** allowing 50+ users to plan trips and share ideas with others
- Communicated with back-end services using **URLSession** to network and make HTTP requests
- Utilized **Core Location** to get the current location from the phone GPS
- Connected with **Google Map API** to access location-based data, embed Google Maps imagery into mobile apps and provided best trip route for users
- Integrated **Map Kit** in the app to display real-world, real-time maps based on user's current location

**Piglet Automated Weighing System Development Using AI**
- Developed a visualize dynamic interface system in **Python** for weighing piglets and uploading data directly to the computer through a wireless network
- Utilized **multi-threading** to run tasks on a separate thread in order to boost the system performance by 50%

**Restaurant Choice Recommendation System Development** (Project Link)
- Coded in **Python** under the **Tkinter** framework to develop a front-end interface
- Connected with **Google Place API** to access nearby location data for restaurant recommendations

**Functionally Reduced And-Inverter Graph** (Project Link)
- Coded in **C++**, parsed input circuit from description files, performed Boolean logic simulations, identified functionally equivalent candidates in circuits through a Boolean satisfiability problem (SAT) solver, and simplified the circuit