

Catherine (Chien-Ying) Yang

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SKILLS

Programming Languages: JavaScript, Java, Swift, Python, HTML/CSS, C++

Frameworks: React, Node.js, GraphQL, SwiftUI, Ant Design, Material-UI | **Databases:** MongoDB, MySQL

Developer Tools: Xcode (iOS App), Git, Web Driver Agent, Android Debug Bridge, Google Chrome Extension

EXPERIENCE

Caterpillar Inc.

Chicago, IL

Software Engineer Intern

May 2023 – Aug 2023

- CAT Hackthon 2023: Vehicle Inspection Web App (1st price). Served as Front-end Developer, designed front-end architecture and built it with React which supports 30+ languages
- Data migration tool: Reduce 70% manual operations by using Python scripts to fetch and process 800+ daily executed tests from Azure pipeline, and automatically generate CSV files for importing the records to test plans in Azure DevOps.
- Daily test report generator: Developed Python scripts to export test statistics from Azure pipeline in CSV for management

Department of Information Management, NTU

Taipei, Taiwan

Programming Teaching Assistant

Sep 2021 – Jan 2022

- Taught a 2-hour Python course twice weekly with original tutorials and hands-on work to 800+ students. Held individual office hours for 20+ students 3 hours per week

ShopBack Co. Ltd.

Taipei, Taiwan

Software Developer Intern

Feb 2021 – Jul 2021

- Automated testing scripts using Python for 2 key projects and successfully improved team efficiency by 60% daily
- Utilized Web Driver Agent and Android Debug Bridge to perform automatic tests on iOS and Android APP

PROJECTS

Collaborative Bookmark Group Management Website Development ([Project Link](#))

- A web service allowing multiple users to co-edit bookmarks groups in real-time and share feedback through extension
- 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 Mobile Application Development ([Project Link](#))

- Developed a co-editing trip planning iOS App in Swift allowing 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 Automatic Weighing System Development

- Developed a visualize dynamic user interface system in Python for weighing piglets and uploading data directly to the computer through a wireless network
- Conducted data analysis by using Pandas, NumPy, Matplotlib packages to automatically determine the weight of a piglet in a short time and achieved high efficiency with an error rate of 0.7%
- Utilized multi-threading to run tasks on a separate thread in order to boost the system performance by 50%

EDUCATION

Boston University (BU)

Boston MA, USA

M.S. in Computer Science

Dec 2023 (Expected)

National Taiwan University (NTU)

Taipei, Taiwan

B.S. in Engineering Science

Jun 2021