HUAN-FENG YEH

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EDUCATION

Northeastern University, Khoury College of Computer Sciences   Boston, Massachusetts
Master of Science (GPA: 3.65/4)   Dec 2023
- Relevant Courses: Database Management, Mobile App Design, Algorithms.

National Changhua University of Education (NCUE), Electrical Engineering   Changhua, Taiwan
Bachelor of Science (GPA: 3.9/4)   January 2021
- Relevant Courses: Object-Oriented Program Design

WORKING & RESEARCH EXPERIENCE

Code For Boston   *May 2024 - Present*
Software Developer
- **Developed Playwright E2E tests** for the MAPLE web app, creating test coverage for database operations, validating that the app properly interacts with Firebase and NodeJS backend systems.
- **Utilized JavaScript and TypeScript with Page Object Model** to design test frameworks, reducing test maintenance.
- **Improved test reliability by automating 80% of manual tests**, optimizing the workflow for validating user roles and database consistency through Firebase Emulator in Docker.

CENTER OF ADVANCED TECHNOLOGY FOR AUTISM SPECTRUM DISORDERS(ASD)   *Sep 2019 – Jan 2020*
Research Assistant
- Developed and implemented software solutions for interactive robotic systems used in educational settings.
- Collaborated with electrical engineers and mechanical teams to ensure smooth integration of robotic systems.
- Troubleshot hardware and software interfaces, optimizing communication protocols between devices.

TECHNICAL SKILLS

Programming Language	Java, JavaScript, Python, HTML/CSS, JSON, SQL
Frameworks & Databases & Libraries	ReactJS, Django, Angular, MongoDB, MySQL, React Native
Environments & Tools	Docker, AWS, NodeJS, Linux, Git, IntelliJ, Playwright

PROJECT EXPERIENCE

Machine Vision Lab (Group)   Sept 2019 – Jan 2021
Fusion of Image and LiDAR Data for Wheeled Robots' Obstacle Avoidance Motion Control.
- Developed software applications to interface with LiDAR sensors and robotic control systems for obstacle avoidance.
- Collaborated with a cross-functional team of engineers to integrate hardware and software components, ensuring precision in control systems.
- Utilized **LabVIEW** and **NI CompactRIO** to develop user interfaces for wheeled robots in a manufacturing setting.

Recycling Robotic Arm (Group)   Sept 2019 – June 2020
A Recycling Robotic Arm for separating garbage into different boxes.
- Developed real-time object detection software using **YOLO** and integrated it with robotic arms for automated sorting tasks.
- Used R-CNN in conjunction with Google Colab to train a model, achieving a 90% recognition rate of recyclables.
- Programmed low-level language embedded systems to communicate with sensors and execute commands based on object recognition.

WORKNOW (Group Project)   *Jan 2023 – May 2023*
Tech Stack: Java | Firebase | JSON | XML
A full-stack job-searching mobile app for people to connect with job opportunities in the local community.
- Designed and implemented a scalable **NoSQL Firebase database** to manage job listings for over 10,000 users, optimizing the data storage architecture for fast retrieval and efficient metadata management.
- Developed a **JSON-based** web service that reduced data retrieval time by 25%, providing a smooth user experience while handling concurrent requests.
- Led a team of developers to create a job search interface that improved browsing speed by 30%, integrating **Firebase Authentication and Firestore** for secure and efficient data storage.