

Weihaio Chen

☎ (+1) 702-372-1988 | ✉ chen4129@purdue.edu

Education

Purdue University

PH.D. IN COMPUTER SCIENCE

- Research Interests: Human Computer Interaction, Machine Learning, Data Engineering, Software Engineering

West Lafayette, IN

Sep. 2021 - now

National Sun Yat-San University (NSYSU)

M.S. IN COMPUTER SCIENCE

- Courses: Electronic Signature Protocol And Application, Special Topics In Electronic Commerce And Security Engineering, Cryptography Protocol And Smart Cards

Kaohsiung, Taiwan

Sep. 2015 - Jun. 2017

National Sun Yat-San University (NSYSU)

B.S. IN COMPUTER SCIENCE

- Course: Hack Technology And Forensic, Information Security, Secure Electronic Commerce

Kaohsiung, Taiwan

Sep. 2011 - Jun. 2015

Publication

MIWA: Mixed-Initiative Web Automation for Better User Control and Confidence

CHI'23 (IN SUBMISSION)

- Designed and Implemented MIWA, an interactive PBD system that automatically generates scripts for web automation.
- Implemented natural language description of the script with visual correspondence to the content in the target website.
- Implemented fine-grained control over the web automation process by allowing users to undo, redo, and edit the demonstration trace.

Hamburg, Germany

Apr. 2023

Efficient Key-Aggregate Proxy Re-Encryption for Secure Data Sharing in Clouds

IEEE CONFERENCE ON DEPENDABLE AND SECURE COMPUTING (DSC)

- Combined a Key-Aggregate approach and a Proxy Re-Encryption scheme into a Key-Aggregate Proxy Re-Encryption.
- Proved that the size of the Re-Encryption keys is constant while achieving fine-grained access control rights on the encrypted files.

Kaohsiung, Taiwan

Dec. 2018

Multichannel Television Sound Detector for Analog TV

PATENT

- Used the thread detector method to construct a solution specifically for Android TV to detect the multi-channel system.

Hsinchu, Taiwan

Aug. 2021

Research Experience

Human-Centered Software Systems Lab

HCI RESEARCHER

- Designed and Implemented an interactive user interface using React.js to build a web-scraping tool with better user control and confidence.
- Analyzed data science practitioner's behavior to design interactive tools.

West Lafayette, IN

Jan. 2022 - now

Information Security Laboratory

RESEARCH ASSISTANT IN INFORMATION SECURITY

- Used cryptography standard proof methods to evaluate schemes' security level.
- Combined Key-Aggregate technique with Proxy Re-Encryption scheme.

Kaohsiung, Taiwan

Sep. 2015 - Jun. 2017

VLSI Design Lab

RESEARCH ASSISTANT IN IMAGE PROCESSING

- Used the SIFT algorithm to capture keypoints of two pictures.
- Marked keypoints matches in the dynamic programming backtracking stage to improve the results of the depth map.

Kaohsiung, Taiwan

Feb. 2014 - Dec. 2014

Work Experience

Intel Corp.

SOFTWARE ENGINEER INTERN @ CHROME OS DEPARTMENT

- Compared performance difference by running i965 and iHD media drivers on Chrome OS platforms.
- Used PMT tools to locate and resolve Chrome OS bugs.

Hillsboro, OR

Jun. 2022 - Dec. 2022

Realtek Semiconductor Corp.

ANDROID TV SOFTWARE ENGINEER @ MULTIMEDIA DEPARTMENT

- Designed and implemented test modules of multimedia features using Google's C++ test framework.
- Designed and implemented a TS Parser using C according to ISO 13811 spec.
- Maintained Android TV Behavior spec.

Hsinchu, Taiwan

Sep. 2017 - Mar. 2021

QNAP Systems Inc.

SUMMER INTERN @ SECURITY DEPARTMENT

- Tested the security vulnerabilities of the provided APPs in QNAP's Network-attached storage (NAS).
- Used Metasploit and John the Ripper to hack user's password on NAS successfully.

Taipei, Taiwan

Jul. 2016 - Aug. 2016

Skills

Front-end	Redux, React, HTML, CSS, Figma
Back-end	Express, REST API
Programming	C/C++, JavaScript, Python, LaTeX
DevOps	Jenkins, JIRA
Library	Scikit-learn, Numpy, Pandas, Kera, TensorFlow
Languages	Mandarin, English