

# Pei-Yao Hung

USER EXPERIENCE RESEARCHER · PROTOTYPER

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## Summary

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- Experience (post-undergrad): 13+ years programming, 10+ years UX research, 3 programming classes taught, and 2 UX student teams mentored.
- Methods: Contextual Inquiry, Usability Testing, Semi-structured Interview, Co-Design, Participatory Design, Field Observation, Card Sorting, Survey, Affinity Wall, Application Log Analysis, Comparative Analysis, Heuristics Evaluation
- Skills: JavaScript, React, NodeJS, Python, R, PHP, SQL, NoSQL (MongoDB), HTML, CSS, Qualtrics, Figma
- Collaborators: software developers, visual designers, occupational therapists, epidemiologist, physicians, and patients

## Selected Work Experience

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### UX Researcher & Software Developer

US

School of Information, University of Michigan

Jan. 2015 - Present

- Conduct **contextual inquiry** and **co-design** activities with patients with a neurological impairment, caregivers, and clinicians, applied **thematic analysis** to devise design requirements for sensor-based technological support.
- Develop a board-game inspired **web application** for specifying data sharing policies, evaluated it through **usability testing** (N=27), and demonstrated its learnability and usability over a standard interface using statistical tests (R).

### UX Researcher & Software Developer

US

School of Public Health, University of Michigan

Jul. 2017 - Present

- Oversee a **participatory design** study (N=17) and assist with a **focus group** study (N=21) with African-Americans and Latinx to identify important design dimensions to improve the inclusivity of a lung cancer screening decision aid.
- Collaborate with public health researchers and physicians to develop a multilingual **online decision aid**, [ShouldIScreen.com](https://ShouldIScreen.com) (2.6K weekly visitors worldwide), for patients to explore critical cancer screening decisions.

### UX Researcher & Data Scientist

US

School of Information, University of Michigan

2013 - 2014

- **Interviewed** 26 programmers to understand how expertise affected their information-seeking behaviors.
- Performed **machine classification** of browsing history (using scikit-learn) and **expertise prediction** through regression (using R) to support knowledge-based community interactions (e.g., Q&A).

### UX Researcher & Software Developer

Taiwan

National Taiwan University

2007 - 2008

- Conducted **field observation** of occupational therapy sessions to inform the design of a **paper cutting game** to train visual-motor integration abilities and a **monitoring software** for therapists to effectively evaluate children's progress.
- Collaborated with occupational therapists to roll out a month-long **field deployment** with 7 preschool children with autism who showed improvement and responded positively to the game.

## Education

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### University of Michigan, Ann Arbor

US

MS & PhD in Information Science, with focus on Human-Computer Interaction

2010 - 2020 (anticipated)

### National Taiwan University

Taiwan

BS & MS in Computer Science and Information Engineering

2002 - 2008

## Recent Publications

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### Designing a Web-based Decision Aid for Individuals to Consider Lung Cancer Screening

*PervasiveHealth*

Hung, Pei-Yao, Yan Kwan Lau, Mark S. Ackerman, Rafael Meza

2019

### Supporting Collaboratively Constructed Independence: A Study of Spinal Cord Injury

*CSCW*

Büyüktür, Ayşe G., Pei-Yao Hung, Mark S. Ackerman, Mark W. Newman

2018

## Selected Presentations

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### [Poster] Empowering Patients to Share Patient-Generated Data through a Grid-Based User Interface

*US*

Privacy@Michigan - Celebrating International Data Privacy Day

01/30/2019

### [Demonstration] Sensible Care: using Internet of Things (IoT) data to support collaborative care with sensing and mobile technology

*US*

State of Science conference - Facilitating Health Self-Management and Independence among Adolescents and Young Adults with Disabilities

10/19/2017

### [Seminar] Discount Expertise Metrics for Augmenting Community Interaction

*Taiwan*

National Tsing Hua University Institute of Information Systems and Applications Seminar

07/16/2016

## Selected Mentorship & Teaching Experience

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### University of Michigan, Ann Arbor

*US*

Graduate Student Instructor – Advanced User Research in the Field

2020

- Give a guest lecture to examine a case study of applying **participatory design**.
- Provide feedback on students' **UX research** plans (e.g., interview, survey) to sharpen their research planning skills.

### University of Michigan, Ann Arbor

*US*

Graduate Student Instructor – Programming I (Python)

2019

- Led weekly lab sessions (40+ master students) and office hours to examine important **Python** programming concepts.
- Participated in a panel on problem-solving to share and discuss good **programming practices**.

### University of Michigan, Ann Arbor

*US*

Team Mentor – A team with 5 master students

2015 - 2016

- Guided the **user-centered design** process to propose a wearable application for pregnant woman.
- Provided **critique**, and polished **writing** and **presentation** flow that supports the team to be selected as the **student design competition finalists** at the premier **international conference of Human-Computer Interaction (CHI)**.

### University of Michigan, Ann Arbor

*US*

Graduate Student Instructor – Introduction to Information Studies

2015

- Taught a 1.5 hours lecture in **Human-Computer Interaction** with 240 undergraduate, and graded response papers and visualization projects to improve students' **writing and visual presentations**.

## Honors & Awards

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2015, 2019	<b>Awarded</b> , Travel Grant, Rackham Graduate School, University of Michigan	<i>US</i>
2015, 2018-19	<b>Awarded</b> , Travel Grant, School of Information, University of Michigan	<i>US</i>
2013	<b>Awarded</b> , Research Grant, Rackham Graduate School	<i>US</i>
2010	<b>Runner-Up</b> , Mobile Apps Challenge, University of Michigan	<i>US</i>
2010	<b>Finalist</b> , iDesign Competition, University of Michigan Library	<i>US</i>