

Pei-Yao Hung

RESEARCH DEVELOPER

☎ +1 (734) 926-5082 | ✉ peiyaoh@umich.edu | 🏠 peiyaoh.github.io

Summary

- Experience (post-undergrad): 16+ years programming, 10+ years user experience (UX) research involving system building
- Skills: JavaScript, React/Angular/Vue/Next.js, Node.js, ReactNative, Python, PHP, SQL, NoSQL, HTML, CSS, R, Git, Jira
- Collaborators: installation artists, visual designers, occupational therapists, epidemiologists, pharmacists, applied mathematicians, physicians, caregivers, and patients

Selected Work Experience (more)

Software Development Lead

US

The Wearables In Reducing Risk and Enhancing Daily Lifestyle Center (WIRED-L), University of Michigan

May 2021 - Present

- Collaborate with CareEvolution, Inc and utilize its framework to develop a cross-platform **mobile app** with dashboards and just-in-time notifications using **Angular** for a clinical trial (N=600) funded by the American Heart Association.
- Develop a backend architecture on **Google Cloud Platform** using **Node.js** to support account management, study progress monitoring, **Fitbit** data retrieval, SMS scheduling and delivery (**Twilio**).
- Apply **agile** project management using **Airtable** to collaborate with designers, a developer, and a QA engineer.

Technical Lead & Product Management

US

College of Engineering, University of Michigan

May 2021 - Aug. 2022

- Lead a team to develop an **online knowledge-sharing platform** using **Next.js** on **Google Cloud Platform** to connect Black, Indigenous, and People of Color (BIPOC) entrepreneurs in the field of Public Interest Technology.
- Mentor junior developers through curating learning materials, drafting templates, and **code review**.

Software Developer & PhD Researcher (project)

US

School of Information, University of Michigan

Jan. 2015 - Apr. 2022

- Develop back-end API services using **Node.js/MongoDB** to perform data processing and access control that enable the creation of a family of privacy-aware data sharing applications to support care team collaboration.
- Develop a game inspired web app using **Javascript/HTML/CSS/React** for sharing **patient-generated health data**.
- Develop an **Android** mHealth solution with push notifications (**OneSignal**) for self-tracking to support chronic care.

Software Developer & PhD Researcher (project)

US

School of Public Health, University of Michigan

Jul. 2017 - Aug. 2022

- Train epidemiologists to use **Git** to collaboratively develop a responsive multilingual **decision aid**, ShouldIScreen.com (~9K visits/week) using **React/PHP/MySQL/Apache**, for patients to explore critical **cancer screening decisions**.
- Apply **A/B testing** for design refinement, and mentor an undergrad developer to realize user-friendly features.

Data Scientist & PhD Researcher (project)

US

School of Information, University of Michigan

2013 - 2014

- Orchestrated a web-scraping system to extract programming resources' content (**Python/BeautifulSoup**), and calculated **tf/idf** to classify programmers' browsing history for estimating their levels of expertise (**Pandas/scikit-learn**).

Education

2012, 2022 **MS & PhD in Information Science (Human-Computer Interaction)**, University of Michigan, Ann Arbor

US

2006, 2008 **BS & MS in Computer Science and Information Engineering**, National Taiwan University

Taiwan

Selected Mentorship & Teaching Experience

University of Michigan, Ann Arbor

US

Graduate Student Instructor – User Interface Development

2020

- Ensured the smooth operation of a remote Computer Science course with 360+ students across different time zones.
- Designed homework for students to apply User Interface Development concepts using **HTML/CSS/Javascript**.

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**.

National Taiwan University

Taiwan

Instructor – Adobe Flex/Flash/ActionScript Prototyping Crash Course

2009

- Lectured 20+ students the fundamental concepts required for **rapid prototyping** using **Adobe Flex/Flash/ActionScript**.

National Taiwan University

Taiwan

Instructor – Object Oriented Programming using C#

Winter, 2009

- Developed syllabus, wrote lectures, created projects, presented, and graded, successfully facilitated understanding of programming, resulting in 5 students with no technology background developing a simple calculator with graphic user interface in ten days using **C#**.

Selected Presentations

Mainstreaming the embodied knowledge and lived experiences of BIPOC PIT Practitioners

US

Public Interest Technology Knowledge Network Kick-Off

11/18/2021

[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

Recent Publications

Data Checkers: A Grid-Based UI for Managing Patient-Generated Data Sharing to Support Collaborative Self-Care

Frontiers

Hung, Pei-Yao, Drew Canada, Michelle A. Meade, and Mark S. Ackerman

2022

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

Certification & Training

2020	Inferential Statistical Analysis with Python , University of Michigan, Ann Arbor	Coursera
2020	Understanding and Visualizing Data with Python , University of Michigan, Ann Arbor	Coursera
2017	Preparing Future Faculty Seminar , University of Michigan, Ann Arbor	US
2016	Front-End JavaScript Frameworks: AngularJS , The Hong Kong University of Science and Technology	Coursera
2013	Introduction to Data Science , University of Washington	Coursera