Yuan Ren

PhD Student, University of California, Merced

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EDUCATION

PhD Student, Electrical Engineering & Computer Science   Sep. 2019 - Now
University of California, Merced, CA

Research Area: Interaction & Input on Wearable Devices, Haptics Feedback

Master of Science, Computer Science   Jan. 2015 - Dec. 2016
University of Southern California, Los Angeles, CA

Courses: Algorithm Design, Operating System, Web Technology, Intro to Artificial Intelligence, Database System

Bachelor of Engineering, Software Engineering   Sep. 2010 - Jul. 2014
Beijing Jiao Tong University, Beijing, China

Courses: Data Structure, Operating System, Distributed Systems, Software Testing, Java EE Web Development

INTERNSHIP

Google: Software Engineering Intern   May. 2022 - Aug. 2022

- Designed and implemented a prototype that enable bidirectional translation experience on AR glasses and its companion phone for a 1:1 conversation scenario
- Conducted a pilot study to evaluate the prototype with Google Translate conversation mode as the baseline.

PUBLICATION

[1] **Yuan Ren**, Ahmed Sabbir Arif. 2021. **Stepper, Swipe, Tilt, Force: Comparative Evaluation of Four Number Pickers for Smartwatches**. In Proc. ACM Hum.-Comput. Interact. 5, ISS, Article 500 (November 2021), 21 pages. (Honorable Mention Award)

[2] Tafadzwa Joseph Dube, **Yuan Ren**, Hannah Limerick, I. Scott MacKenzie, Ahmed Sabbir Arif. 2022. **Push, Tap, Dwell, and Pinch: Evaluation of Four Mid-Air Selection Methods Augmented with Ultrasonic Haptic Feedback**. In Proceedings of the 2022 ACM Interactive Surfaces and Spaces Conference (ISS 2022). ACM, New York, NY, USA, to appear.

RESEARCH PROJECTS

Stepper, Gesture, Tilt, Force: Comparative Evaluation of Four Number Pickers for Smartwatches   Mar. 2019 - Mar. 2020

- Presented three new methods for picking numbers on smartwatches by performing directional swipes, twisting the wrist, and varying contact force on the screen. - Conducted comparative user studies evaluate three new methods with native Apple picker.

Push, Tap, Dwell, and Pinch: Evaluation of Four Mid-Air Methods Augmented with Ultrasonic Haptic Feedback   Sep. 2020 - Oct. 2021

- Compared four mid-air target selection methods (*Push*, *Tap*, *Dwell*, *Pinch*) with two types of ultrasonic haptic feedback (*Select*, *Hover & Select*) in a Fitts' law experiment.
- Proposed several design recommendations of selection methods based on design priorities (top, moderate, low) and the availability of haptic feedback

ForceSlider: Force Sensitive Keyboard for Smartwatches (onging)   April. 2020 - May 2022

- Proposed layered miniature keyboard leveraging force to input non-dictionary word.
- Enabled word-level, character-level and hybrid input methods to support richer input experience.

AWARDS & SCHOLARSHIPS

Summer EECS Bobcat TravelFellowship at UC Merced   2022

Summer EECS Bobcat Fellowship at UC Merced   2020

SKILLS

Programming Language: Java, Python, JavaScript, C
Web Technologies: Spring, Django, React, Redux, Node.js