FARNAZ ZAMIRI ZERAATI

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Legal Status in US: Permanent Resident

EDUCATION

University of Maryland, College Park, MD — Expected 2025
Ph.D. in Computer Science
Advisor: Hernisa Kacorri

Polytechnic University of Madrid, Spain — Sep 2019 – Jan 2020
M.Sc. in Human-Computer Interaction (1 semester before joining UMD)

Amirkabir University of Technology, Tehran, Iran — 2014 – 2019
B.Sc. in Computer Engineering
Thesis: Design and implementation of an obstacle detection and warning system for the visually impaired

Related Coursework: Statistical Pattern Recognition, Computational Linguistics, Interactive Technologies in HCI, Health Informatics and Visualization, Advances in XR, Challenges for Accessible Computing

RESEARCH INTERESTS

Human-Computer Interaction; Accessibility; Human-Centered AI; Augmented Reality

PROFESSIONAL EXPERIENCES

University of Maryland, Intelligent Assistive Machines Lab — Jan 2022 – Present
Graduate Research Assistant

- Exploring machine teaching with non-expert end users.
- Analyzing blind users' feedback in teachable object recognizers.
- Conducting in person and remote user studies with blind participants.
- Analyzing qualitative responses from blind participants interacting with AI-infused smart glasses.

University of Maryland, Center for Advanced Transportation Technology — Feb 2020 – Jan 2022
Graduate Research Assistant

- Developed a mobile application for helping visually impaired pedestrians know their surroundings, using computer vision techniques.
- Developed a system for alerting the user of any imminent crash hazard while driving, using the information received from the cameras at an intersection.
- Researched localizing vehicles and pedestrians with Dedicated Short-Range Communication (DSRC) using Universal Software Radio Peripheral (USRP).

Iran Telecommunication Research Center, Tehran, Iran — July 2017 – Oct 2017
Research Intern

- Designed and developed an Interactive system, helping kids to learn colors in different languages, using color sensors, Raspberry pi and a web application.
- Conducted user studies with elementary school children to assess usability of the above-mentioned interactive system.

PUBLICATIONS

Grouped as peer-reviewed conference papers [C.], journal articles [J.], and posters [P.]

C.2 Hong, J., Gandhi, J., Essuah Mensah, E., **Zeraati, F.Z.**, Jarjue, E.H., Lee, K. and Kacorri, H. *Blind Users Accessing Their Training Images in Teachable Object Recognizers.* In ACM SIGACCESS Conference on Computers and Accessibility (ASSETS 2022). [Acceptance rate: 26.5%]. ***Best Paper Nominee***

C.1 Mahmoudi, M.T., **Zeraati, F.Z.** and Yassini, P. *A color sensing AR-based interactive learning system for kids.* In 12th Iranian and 6th International Conference on e-Learning and e-Teaching (ICeLeT). IEEE, 2018.

J.1 Mahmoudi, M.T., **Zeraati, F.Z.** and Yassini, P. *Color Sensing AR-Based Approach for Supporting Vocabulary Learning in Children.* International Journal of Information and Communication Technology Research (IJICTR 2020).

P.1 *MyCam: A Teachable Object Recognizer for the Blind*, 39th Annual HCIL Symposium, University of Maryland, College Park, 2022.

PROFESSIONAL SERVICES

Student Volunteer: Human-Computer Interaction Lab (HCIL) symposium 2023, Including Disability Global Summit 2023

TEACHING & MENTORING

University of Maryland, College Park

- Teaching Assistant, Web Development with JavaScript — Fall 2023
- Teaching Assistant, Inclusive Design in HCI — Fall 2022
- Peer Mentor, Intelligent Assistive Machines Lab — Spring, Fall 2022

Amirkabir University of Technology

- Teaching Assistant, Embedded and Real-Time Systems — Fall 2017
- Teaching Assistant, Technical English — Spring 2017
- Teaching Assistant, Electric Circuits — Fall 2016

HONORS AND AWARDS

- ASSETS 2022 Best Paper Nominee (Top 5%)
- Honored as an outstanding student, Amirkabir University of Technology

SKILLS

Skills: Python, C, JavaScript, R, MATLAB, SQL (Postgres), HTML/CSS, Arduino, Android
Platforms & Tools: Figma, Tableau, D3.js, Fusion 360, Nvivo, Raspberry Pi, TensorFlow, PyTorch, Unity, Git, Visual Studio, Xcode, Android Studio