Morva Saaty

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Scholar | LinkedIn | Website | Twitter

Summary

- HCI /AI Researcher with 2+ years of experience in **conducting user research, creating, reporting, and communicating** actionable insights to inform design and product development.

- Skilled in various **qualitative and quantitative research methods**, data analysis, data visualization and interpretation.

- Highly motivated individual with **strong leadership and management skills**.

Education

Ph.D., Computer Science and Applications, Virginia Tech, Blacksburg, VA, 2020 – March. 2025

M.Sc., Information Technology Engineering, University of Tehran, Tehran, Iran, 2016 - 2018

B.Sc., **Information Technology Engineering**, University of Tehran, Tehran, Iran, 2011 – 2016

Selected Experiences

R&D Data Scientist Intern at Procter & Gamble, Mason, OH, May. 2023 – August. 2023

- Studied the relation between consumers' perceptions and visual changes in skin-care treatment using generative AI (LLM), automatic speech emotion recognition (Whisper, Wav2Vec), web scraping, topic modeling analysis (BERT), and multimodal sentiment analysis.
- Collected multimodal data from social media platforms (e.g., YouTube, Reddit, TikTok)

Research Assistant in Notification Systems lab, Virginia Tech, Blacksburg, VA, Advisor: Dr. Scott McCrickard

- SmarTrail and Thru-Hikers, Jan. 2021 – Present

- Researched how technology and social media affect hikers' outdoor experiences to design a socio-technological information system; Collected data from field research, interviews, surveys, and web scraping.
- Developed exploratory Spatio-temporal data analysis and interactive map-based data visualizations on large datasets of social media to understand hikers' socio-emotional and motivational aspects using **machine learning techniques**, data visualization tools (e.g., D3.js, Plotly, Pydeck), and **qualitative data analysis methods**.
- Designed and developed a mobile application, to collect hikers' data over 14 weeks to improve their experience by working in a cross-functional team of researchers from urban planning, computer science, and recreation.
- Recruited 20+ participants, including different stakeholders of the Appalachian Trail, remote and in-the-wild.
- Designed and moderated two workshops at ALDHA to evaluate geo-based emotion-related visualizations, and explore opportunities and tensions of using digital technologies on the trail (using Focus groups, Storyboards, Empathy and Journey Maps, Card Sorting, Prototyping).

- Rural Exergames and Game-mediated Social Experiences, Aug. 2020 – Jul. 2022

- Collected large dataset from Reddit and Analyzed players' behaviors and perceptions while playing Pokemon GO in-person and online using topic modeling analysis and a qualitative research method, Thematic analysis.
- Investigated players' needs and social experiences afforded by game-mediated technologies through conducting surveys and interviews and using qualitative and quantitative data analysis methods.
- Provided design considerations for multiplayer mobile exergames to encourage users to be more physically active while engaging them in nature and establishing a shared experience for remote recreation between users.
- Designed, conducted, and analyzed diary studies, focus group, and brainstorming sessions of 90+ participants.
- Conducted competitive analysis and usability testing to evaluate 7 exercise-based games to identify opportunities/challenges to motivate young adults to do more physical activity while playing.

Research Assistant in Multimedia lab, University of Tehran, Iran

Master's thesis: Audio-Visual Attention Model in Cloud Gaming, Mar. 2017 – Dec. 2018

- Studied the effects of audio features on players' visual attention maps for efficient bitrate allocation in cloud gaming (Using Eye Tracking system, experimental design, and quantitative analysis).

Leadership Experiences | Service Activities | Awards

- **ACM reviewer** for CHI 2024, CHI 2023, CHI 2022, NordiCHI 2022, TEI 2023, and CHI Play 2022.
- A member of ACM Special Interest Group on Computer-Human Interaction and ACM Journal on Computing and Sustainable Societies review board.
- **Student Volunteer** at COMPASS 2022 and CHIPLAY 2022 (Duties included moderating paper sessions, asking questions, and resolving technical issues.)
- **Volunteered** in creating contents for WIDS PS 2024 (Women in Data Science Puget Sound) – Fall 2023
- **Mentored** of 24+ students for HCI Capstone projects, independent research, and master thesis at Virginia Tech (Fall and Spring 2023, Spring 2022, and Fall 202).
- **Designed and conducted a workshop** at ACM Capital Region Celebration of Women in Computing about designing mobile outdoor games considering diversity and inclusion perspectives (Spring 2023).
- Led and facilitated user studies across 70+ participants testing the mobile app and observing users' behaviors in the science festival at Virginia Tech (Spring 2023).
- Being nominated by Virginia Tech for PhD Fellowship program at Google (Fall 2021) and Microsoft (Fall 2022).
- Received Scholarship to participate in Grace Hopper Celebration 2021 and 2022, Tapia 2020, and COMPASS 2022.
- Selected to participate in CRA-WP 2022 (Grad Cohort workshop for women) and ACM-CAPWIC 2023.
- Selected to participate in the **Accessibility Professional Certification Grant** Program for the Certified Professional in Accessibility Core Competencies (CPACC) certification.

Skills

HCI/User Research: User-Centered Design, Qualitative and Quantitative Research Methods, Usability Testing, Empirical Methods, Interviews, Surveys, Focus Groups, Affinity Diagramming, Wireframing, Prototyping, Field research

Data Visualization: D3.js, ggplot2, matplotlib, Plotly, Vega, Vega-Lite, Tableau.
UI/UX Design: Figma, LucidChart, Sketch, Miro, Balsamiq, Qualtrics, Adobe Illustrator.
Web Design/Development: JavaScript, HTML5, CSS3, Bootstrap, Django.
Programming Languages: Python, C++, Java, R, SQL.
Machine Learning: Scikit-learn, PyTorch, Pandas, LLM, Whisper.
Soft Skills: Technical Writing, Multi-disciplinary Collaboration, Communication, Mentoring, Presentation.
Related Courses: Usability Engineering, Information Visualization, Models and Theories in HCI, User Interface Software, Statistical Inference, Introduction to Big Data, Advanced Machine Learning, and Deep Learning.

Selected Publications

- **Morva Saaty**, Derek Haqq, Mohammadreza Beyki, Taha Hassan, and D. Scott McCrickard. "Pokémon GO with Social Distancing: Social Media Analysis of Players' Experiences with Location-based Games." *Proceedings of the ACM on Human-Computer Interaction* 6, no. CHI PLAY (2022): 1-22.

- Lindah Kotut, Neelma Bhatti, **Morva Saaty**, Derek Haqq, Timothy L. Stelter, and D. Scott McCrickard. "Clash of times: Respectful technology space for integrating community stories in intangible exhibits." In *Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems*, pp. 1-13. 2020.

- **Morva Saaty**, and Mahmoud Reza Hashemi. "Game Audio Impacts on Players' Visual Attention, Model Performance for Cloud Gaming." In *2022 Symposium on Eye Tracking Research and Applications*, pp. 1-7. 2022.

- **Morva Saaty**, Derek Haqq, Devin B. Toms, Ibrahim Eltahir, and D. Scott McCrickard. "A Study on Pokémon GO: Exploring the Potential of Location-based Mobile Exergames in Connecting Players with Nature." In *Extended Abstracts of the 2021 Annual Symposium on Computer-Human Interaction in Play*, pp. 128-132. 2021.

- Neelma Bhatti, Lindah Kotut, Derek Haqq, Timothy L. Stelter, **Morva Saaty**, Aisling Kelliher, and D. Scott McCrickard. "Parenting, studying and working at home in a foreign country: How international student mothers in the us use screen media for and with their young children: Parenting, studying and working at home in a foreign country." *Proceedings of the ACM on Human-Computer Interaction* 5, no. CSCW2 (2021): 1-25.