Niloofar Mansoor

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EDUCATION

University of Nebraska - Lincoln — **Lincoln, Nebraska, USA**

PhD in Computer Science; GPA: 4.0 — August 2017 - December 2022

Dissertation: An Empirical Assessment of Formal Models and Static Analysis Alarms in the Context of Defect Detection

Adviser: Dr. Bonita Sharif

University of Nebraska - Lincoln — **Lincoln, Nebraska, USA**

M.Sc., Computer Science; GPA: 4.0 — August 2017 - May 2020

Thesis: Formal Modeling and Analysis of a Family of Surgical Robots - Defended December 2019

Shahid Chamran University of Ahvaz — **Ahvaz, Khuzestan, Iran**

Bachelor of Engineering, Computer Engineering - Software — September 2011 - March 2016

RESEARCH METHODS AND SKILLS

Research Methods: Experimental design, human subjects testing, recruitment, instrumentation, eye tracking, interviews, user study design, usability studies, surveys, exploratory data analysis, quantitative analysis, qualitative methods, mixed-methods research, statistics.

Programming Languages and Technologies: Java, Python, HTML5, CSS, SQL, R, Git, OOP, Pandas, Alloy Specification Language, Adobe Creative Suite, Qualtrics, JASP, SPSS, Tobii studio.

PROFESSIONAL EXPERIENCE

Nebraska Governance and Technology Center - Postdoctoral Associate — **January 2023 - Present**

- **Large-scale survey on technology attitudes** Responsible for improving survey methodology, quantitative data analysis, and reporting of results.

SERESL Lab - Graduate Research Assistant — **January 2020 - December 2022**

- **Assessing static alarm warning messages** Designed and conducted an online survey (using Qualtrics) and an eye tracking study on the effects of repositioning and merging static alarms in manual code inspection. Designed and implemented web applications for two cognitive tests (operation span and mental rotation) as part of the studies. (The survey results published at SCAM 2022. An experience report is published in HUMAN 2022. The eye tracking study results to be submitted to EMSE journal.)
- **An exploratory study on the Alloy specification language** Designed and conducted an online controlled experiment on the comprehension of the Alloy Specification Language. Responsible for designing the tasks, recruitment, conducting the experiment, data analysis, and log analysis. (Accepted in the FormaliSE 2023 conference.)
- **Sentiment categorization of Stack Overflow questions by developers and tools** Analyzed data collected from developers regarding sentiment and important features of Stack Overflow (SO) questions and analyzed the results of multiple sentiment analysis tools determining the sentiment of SO questions. (Published in SEMotion 2021)

E2 Lab - Graduate Research Assistant — **July 2017 - December 2019**

- **Research on Android compatibility issues due to API-related mismatches** Ran experiments with the SAINTDroid tool and other related tools for comparing the new method to existing methods and reported the results. (Published in DSN 2022)
- **Dependability analysis of a robotic surgery system** Modeled and analyzed the safety-critical properties of a robotic surgery system in the Alloy specification language and tested the robotic system to find concrete flaws. (Published in ESEC/FSE 2018, ICSE-NIER 2020)

Honors and Awards

Mary E. and Elmer H. Dohrmann Fellowship   **June 2022**

Awarded from the Mary E. and Elmer H. Dohrmann Fellowship Fund by the School of Computing at the University of Nebraska-Lincoln for leadership and service

UNL School of Computing Award   **April 2022**

2021-2022 Outstanding Graduate Student Service Award

Milton E. Mohr Fellowship   **April 2021**

Awarded by the College of Engineering at the University of Nebraska-Lincoln for the Academic Year 2021-2022. The Milton E. Mohr Fellowship was established in 1989 for students in the College of Engineering or Biotechnology degree programs. Students are selected based on their academic performance and potential for accomplishments in their specific fields.

CRA-WP Grad Cohort Workshop   **April 2022**

Sponsored by Grad Cohort Workshop for Women, funded by the NSF.

Outreach Events

Girls Code Lincoln Workshop   **April 2022**

During this event, I taught the students from Girls Code Lincoln about eye tracking and how we conduct eye tracking studies. We also talked to them about the exciting aspects of pursuing a career in Computer Science and Software Engineering.

Sunday with a Scientist Virtual event   **May 2021**

In this event, the public meet a different scientist each month to learn about topics and careers in science. Scientists will share what they study in a fun, informal way through hands-on activities, demonstrations, and conversation. We played a live game with participants via zoom and taught them how errors are detected and corrected.

Lincoln Hour of Code and Interactive Tech Fair event   **December 2019, December 2022**

During this event, I helped showcase some of the eye tracking devices and encouraged children to use computers equipped with eye tracking devices to learn how useful they can be.

Archie's Late Night Party at State Museum   **June 2019**

I helped with showcasing eye tracking devices and introduced children and their parents to eye tracking, the kids read bedtime stories on a screen, and we showed the visualization of their eye gaze to them and their parents. The goal was to encourage children to explore computer science through simple activities.