RAHAF ALHARBI

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EDUCATION

PhD University of Michigan, School of Information — May 2025
Co-advised by Dr. Robin Brewer & Dr. Sarita Schoenebeck

BS UC San Diego, Mechanical Engineering — Mar. 2020
GPA: 3.67 out of 4.00
Minored in Ethnic Studies

HONORS AND AWARDS

MAE Senior Design Runner Up — 2020
2nd place award for our senior design project titled *Building Low-Cost & Usable Neonatal ECMO Simulations*

KAUST Gifted Student Program — 2014
Fully funded undergraduate scholarship given to 1% students in Saudi Arabia for STEM excellence. Estimated funding cost: $300K USD.

Thurgood Marshall Honors Program — 2015
I was inducted to the program after my first quarter and remained eligible since. Entry requires a successful completion of one full-time quarter with a 3.8 Must maintain at least a 3.50 cumulative GPA to remain in program.

PUBLICATIONS

Conference Papers (Peer-Reviewed)

[C1]. **Alharbi, R.,** Ng, A., Alharbi, R., & Hester, J. (2020, April). " I Am Not an Engineer": Understanding How Clinicians Design & Alter Assistive Technology. In *Extended Abstracts of the 2020 CHI Conference on Human Factors in Computing Systems* (pp. 1-8). [Acceptance rate: 41.8%]

RESEARCH EXPERIENCE

Northwestern University, Evanston, IL — 2019
Summer Intern, Ka Moamoa Lab + Feinberg Medical School

- Planned optimal and safe PCB placement
- Designed 3D printed PCB fixture and battery connection
- Analyzed 3D printed fixture for stress/strain and tested failure scenarios
- Interviewed and coded 8 clinicians on makerspace experience (resulted in C1.)

King Abdullah University for Science & Technology, Thuwal, SA 2018
Summer Intern, Clean Combustion Research Center

- Designed & conducted an experimental fluid mechanics project
- Analyzed fluid speed-photography data
- Categorized three types of laminar jet visualizations by varying density and velocity

SELECTED ENGINEERING PROJECTS

Neonatal ECMO Simulation *(Senior Design project)* Jan 2019 – Mar 2020
Sponsored by Rady Children's Hospital

- Led participatory sessions with pediatric & cardiac surgeons to determine muscle materials
- Conducted material analysis on five proposed muscle designs
- Designed 3D printed enclosure for pseudo-created fat/tissue and vein/artery.
- Overall, our designed system is low cost ($150), reusable, highly realistic, and easily manufacturable
- Awarded with MAE Senior Design Runner Up

PRESENTATIONS AND INVITED LECTURES

Paper Presentation, " I Am Not an Engineer": Understanding How Clinicians Design & Alter Assistive Technology. SIGAccess Riyadh, Jun. 2020.
Invited by Dr. Shiroq Al-Megren

Lecture, "Making PDFs Accessible." MAE 156B (Senior Design), UCSD. Apr. 2020.
Invited by Dr. Huihui Qi

PROFESSIONAL SERVICE

Peer-Reviewed Articles for:

- alt. chi 2020, *with* commentary appeared in Ymous, A., Spiel, K., Keyes, O., Williams, R. M., Good, J., Hornecker, E., & Bennett, C. L. (2020, April). " I am just terrified of my future"—Epistemic Violence in Disability Related Technology Research. In *Extended Abstracts of the 2020 CHI Conference on Human Factors in Computing Systems* (pp. 1-16).

STUDENTS MENTORED

- Jasmine Duong (UROP), BSI'23 Sept 2020 – Present

LANGUAGES

English: Fluent (at the level of native speakers)
Arabic: Native speaker

SKILLS

Design: SOLIDWORKS, AutoCAD, EAGLE, Figma
Programming: Python, C/C++, MATLAB
Methods: qualitative & quantitative analysis, critical participatory design