Mariam Hassib, PhD

UX Researcher & Project Manager

PROFILE

I am a passionate UX researcher with over 7 years experience, dedicated to understanding human behavior and needs to drive informed design decisions. I am proficient in both qualitative and quantitative research methods. My work currently lies at the intersection of HCI and AI where I lead a research project on developing tools to bring AI experiences to industry experts. I have led multidisciplinary teams of 3-8 people on projects in various contexts ranging from education to automotive.

EXPERIENCE

Senior Researcher - 02/23 - present

Human-Centered Engineering, Fortiss Research Institute

- Leading a high impact project with 1 Mio € in funding on bringing ML/AI to non-expert industry professionals.
- Managing stakeholders for efficient communication between partners
- Developing personas, wireframes, usability testing, co-design workshops, data collection & statistical analysis
- Writing and acquiring funding for national, & EU research projects
- Mentoring and training junior researchers

Lead Researcher (Postdoc) - 09/18 - 01/23

Usable Security & Privacy, Bundeswehr University, Munich

- Lead researcher in the successfully ended DFG project UbiHave (ca. 320k € in funding), producing 18+ high impact publications
- Designing & conducting field & lab studies. Statistical analysis of collected user behavior and performance data.
- Testing ML models on collected behavioral biometric data
- Proposal writing & securing funding for 2 follow up research projects
- Student mentoring & teaching activities

HCI Researcher - 04/14 - 08/18

Media Informatics, LMU Munich

- Design & development of web/mobile interfaces powered by physiological sensors leading to 20+ high impact publications as part of several EU funded projects
- Conducting studies, qualitative & quantitative data analysis
- Mentoring students, conference volunteering & teaching activities

UX Researcher - -03/13 - 12/13

Trustious (Reviews Platform), Cairo, Egypt

- Lead UX researcher in the first online reviews platform startup in Egypt
- Market research and competitive analysis
- Redesign of sign up, product pages, review experience features
- Conducting focus groups, interviews, usability testing, card sorting
- Communicating findings to product team & stakeholders
- Integrating Lean/Agile startup models

UX Researcher - 12/10 - 02/13

Arability (UX Consultancy), Cairo, Egypt

- Conducting usability testing, heuristic evaluations, card sorting, & interviews among other UX research activities for web/mobile apps
- Acquiring customers in various sectors (Education, Tourism, Telecom)
- Communicating evaluation findings to industry stakeholders

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EDUCATION

2014 - 2018

PhD in Human Computer Interaction

LMU Munich, Media Informatics

HCI, Affective computing, physiological sensing, applied machine learning.

2010 - 2012

MSc. Computer Engineering

INFOTECH, University of Stuttgart

SW Engineering, HCI Grade: 1.4

2005 - 2010

BSc. Digital Media Engineering

German University in Cairo— Egypt Computer Science, Media Informatics Grade: 1.04 (High Honors, top 5%)

SKILLS

Project Management

Organizing, leading, and managing teams, communicating with stakeholders, Agile methodologies, PRINCE 2 foundation certified

UX Research Methods

Designing valid lab/remote/field studies, conducting focus groups, co-design workshops, interviews, designing surveys, card sorting, experience sampling, thematic analysis, personas, user journey mapping, wireframing, Lo-Fi prototypes, usability testing

Data & Statistical Analysis

Quantitative data analysis using SPSS, R, Applied ML, Python (basic)

Physiological Sensing

Electroencephalography, Electromyography, Eye tracking, Heart Rate Sensing

Development & Tools

HTML/CSS, JS, Atlas.TI, Balsamiq, Miro. Microsoft Suite

Languages

English (fluent), German (fluent), Arabic (mother tongue)

SELECTED PROJECTS

For a complete list of publications please check Google Scholar

Al-Discoverer: Al Opportunities Exploration Tool for Industry Domain Experts

Lead Researcher (Team of 4) - 2023 → ongoing

To help SMEs explore opportunities for integrating AI in their processes, we are designing the AI-Discoverer. Using an iterative UCD process, we started with a series of **interviews** with domain experts in the insurance industry and ML specialists to explore pain points. We conducted an **ideation session** with UX/ ML researchers. We crafted **2 personas** of domain experts & their **user journey map** to discover AI potential. We used Miro & Axure to build a clickable lo-fi **wireframe** of the tool which asks domain experts questions about their work & produces a roadmap for integrating automation/ML-models into their particular context. We are currently exploring utilizing GPT for feedback and are planning for the next usability testing sessions with domain experts.

HeartChat: Heart Rate Augmented Mobile Messaging

Lead Researcher (Team of 4)

We designed, and evaluated an Android mobile chat application, HeartChat, which integrates heart rate as a cue to increase awareness and empathy. We conducted a **market review & a participatory design workshop** to then create three concepts showing heart rate per message, in real-time, or sending it explicitly. We tested our system in a two week **field study** with 14 participants. We analyzed the user **interviews using thematic analysis &** conducted statistical tests to evaluate the **questionnaires** which showed that HeartChat supports empathy between people. For more details please find the full paper here.

In-Car Emotion Recognition and Feedback

Lead Researcher (team of 3)

To increase driver awareness of their emotions, we developed a novel concept for emotion detection during driving using heart rate & EEG sensors, giving feedback using in-car ambient lighting. We evaluated our concept with 12 drivers on a driving simulator with a fully equipped car. Using a subject-dependent random forests machine learning classifier to achieve an average accuracy of 78.9% for classifying valence and 68.7% for arousal. We conducted 1:1 interviews with drivers to understand their feedback. For more information, please find the full paper here.

Privacy Nudging Mechanisms for Mobile Phone Cameras *Lead Researcher (Team of 3)*

Mobile applications that are granted permission to access the device's camera can access it at any time without showing the user. This lack of transparency raises privacy concerns. Through a **focus group** and **co-design workshop**, we identified 3 approaches for nudging the user that the camera is being accessed: notification bar, frame, and camera preview. We evaluated our designs in a **lab study** (N= 15) which showed that using frame nudges is the least interrupting, although it was less understandable than the camera feed and notifications. For more information, please find the paper here.

CERTIFICATES

May 2023

PRINCE 2 Foundation

Project Management certificate following the PRINCE 2 method

July 2023

Agile UX Design & Research

LinkedIn Learning Course

SCHOLARSHIPS & AWARDS

2011

Google Anita Borg EMEA Finalist

Chosen among 75 scholars & finalists from the whole EMEA region to attend Google Scholars Retreat in Zürich

2014 - 2018

DAAD PhD Scholarship (GERLS)

Chosen among 70 scholars from all of Egypt to complete my PhD in Germany

2014

DAAD German Language Scholarship

For finishing the B2 Goethe German language Certificate in Göttingen

2009

GUC Bachelor Thesis Scholarship

For being in the top 3 students in my major, sponsoring a 6 month stay in Ulm

TEACHING

Tutor - 2007 - 2010

Introduction to Computer Science, Data Structures and Algorithms (German University in Cairo)

Lecturer - 2014 - present

Usable Security, Physiological Sensing in HCl, Advanced Seminar on Media Informatics (UniBW, LMU, Uni Stuttgart)

RESEARCH SERVICE

Program Committee & Reviewer

Since 2016, I have been a reviewer for CHI, UbiComp/IMWUT, INTERACT, MobileHCI, Mensch und Computer, CSCW, NordiCHI, IDC, ToCHI, and other HCI venus.

Editor

Journal of Information Technology 2021

Organizing Committee

ETRA 2024 LBW Chair