



Mohamad Hassan Fadi Hijab

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Personal Details:
19/02/1997 • Beirut • Lebanese
Male • Engaged

In the realm of research, a dedicated and innovative professional with significant experience in the field of Human-Computer Interaction (HCI), especially as it pertains to autism. Proficient in conducting comprehensive studies, developing and testing hypotheses, and publishing the results in reputable journals. Adept at designing and implementing novel methods, tools, and interventions for enhancing the interaction between humans and digital devices, with a particular emphasis on aiding those on the autism spectrum. My research work revolves around understanding the unique challenges faced by autistic individuals and utilizing HCI principles to devise technological solutions that can mitigate these difficulties and improve their quality of life. Moreover, I harbour a keen interest in mathematical publications, frequently incorporating mathematical modelling and statistical analysis into my research methodology. This interdisciplinary approach allows me to harness the power of mathematics to derive deeper insights into human-computer interaction and make substantial contributions to the field.

In teaching, a highly innovative and performance-driven professional with hands-on experience in teaching. Adept at delivering comprehensive live and online teaching sessions to students. In-depth knowledge in designing and creating software programs, integrating systems and software, training end-users, analysing algorithms, modifying source code, writing system instructions, debugging, and maintaining operating systems.

In computer science, a hard-working, Detail-oriented, methodical professional and self-motivated Mobile Application Developer. Worked as an Application Developer with vast experience in continuously developing, implementing and adopting new technologies to maximize development efficiency and innovative applications; skills involve design, developing, implementing and enhancing highly optimized cross-platform hybrid mobile apps and methods to meet both internal and external analysis requirements. With more than 5 years of experience in developing mobile applications on both Android and iOS platforms using Flutter, and mainly Google Firebase and RestAPI.

Professional Experience

University of Bristol, UK Research Visitor

2023

- Collaborated on a joint academic paper with the University of Bristol during a two-week stay, participating actively in seminars, weekly meetings, and co-design workshops (<https://dive.ousmet.com/people/>).
- Contributed to enhancing academic dialogue and knowledge exchange between Hamad Bin Khalifa University and the University of Bristol.
- Acquired hands-on experience in international academic collaboration, enhancing my abilities in research, teamwork, and cultural communication.

Hamad Bin Khalifa University, Qatar Teacher Assistant

2023

Worked as a Teacher assistant throughout the Spring2023 semester with the Information and Communication Technology Accessibility course.

- Prepare and deliver 4 full lectures.
- Correct and provide feedback on students' work in their assignments.
- Accomplished positive feedback from taught students in the semester evaluation.

Hamad Bin Khalifa University, Qatar Teacher Assistant

2022

Worked as a Teacher assistant throughout the Fall2022 semester with the Statistics for Science and Engineering course.

- Prepare and deliver bi-weekly tutorial lectures.
- Correct and provide feedback on students' work in their assignments, course project, and exams.
- Accomplished positive feedback from taught students in the semester evaluation.

Hamad Bin Khalifa University, Qatar
Teacher Assistant

2022

Worked as a Teacher assistant throughout the Spring2022 semester with the Information and Communication Technology Accessibility course.

- Prepare and deliver 4 full lectures.
- Correct and provide feedback on students' work in their assignments.
- Accomplished positive feedback from taught students in the semester evaluation.

Rapid Response Call project, Qatar
Research Assistant

2019 – 2021

Working with Dr. Dena's Al-Thani research group to develop a CVC 3D application named MARVoc for children with ASD.

- Responsible for writing meeting minutes during all group meetings.
- Finding a suitable robotic/humanoid character for the application with suitable color for autism.

Hamad Bin Khalifa University, Qatar

2019 – 2021

Administrative Assistant and University Representative

- Representing HBKU's admissions at academic exhibitions, open houses, school visits, and universities fairs
- Assisting in office work related to admissions: email inquiries, phone calls, excel databases, and PowerPoint presentations
- Proctoring international exams (ACT, SAT, and TOEFL) held at HBKU

Ministry of Education and Higher Education, Lebanon

2020

Volunteer

Prepared and delivered lessons during COVID-19 to improve students reading, writing, and conversing skills. Developed educational content such as notes and course presentations to facilitate pupils' consolidation of learning material. Managed interpersonal dynamics to ensure conducive learning. Tracked and reported on students' progress to improve student academic performance.

- Designed and made videos broadcast on TV and on the ministry's official YouTube channel.
- Drafted mathematics chapter for high school level, including an explanation of the chapters and PowerPoint design and content to improve pupils' learning skills.

Self-Employed, Qatar

2019

Tutor

Provided teaching assistance to precalculus and calculus students. Developed resources for tutoring students to build math skills, including in Algebra I and II, Geometry and Trigonometry. Evaluated students to measure skill progression and determine improvement areas. Supported students in developing and meet academic goals.

- Accomplished positive feedback from students; some finish the course with remarkable grades.

LIU, Location

2018 – 2019

Tutor

Conducted tutor sessions for freshman and first-year students at the student success and development centre. Presented lessons comprehensively and used visual/audio means to facilitate learning. Provided individualised instruction to each student by promoting interactive learning. Assessed and recorded students' progress and provided.

- Assisted numerous students based on student demands.

Leading Innovation Technology
Internship

2018

Collaborated with the research group to research graph technology and graph database. Interpreted research specifications and developed a research schedule that satisfied requirements. Conducted desktop research by using books, journal articles, newspaper sources, questionnaires, surveys, polls, and interviews to gather data. Recorded findings by taking written notes and using appropriate software.

- Focussed on searching in graph database based on ArangoDB and learnt work with JSON language.
- Introduce the implementation of the graph database concept in educational industries such as University

Self-Employed, Lebanon

2016-2019

Tutor

Developed resources for tutoring students to build math skills for high-school and intermediate students following the Lebanese and IB curriculum. Evaluated students to measure skill progression and determine improvement areas. Supported students in developing and meeting academic goals.

- Accomplished positive feedback from students; some finish the course with remarkable grades.

Education

PhD in Computer Science and Engineering

Hamad Bin Khalifa University, HBKU, Qatar (expected Spring2024)

Master of Data Analytics in Health Management

Hamad Bin Khalifa University, HBKU, Qatar

B.S. in Mathematics

Lebanese International University, LIU, Lebanon

B.S. in Computer Science

American University of Culture and Education, AUCE, Lebanon

Professional Development

- **Published mobile application:**
Android (MAAN – Guess The Mystery Number – Card Games Calculator – Behind Numbers – Math Kit – Tutoring Tracker)
iOS (MAAN – Guess The Mystery Number – Card Games Calculator – Behind Numbers – Math Kit – Tutoring Tracker)
- **Co-authored Six mathematics books** titled: HIJAB Mathematics used in schools as a primary book.
- Courses in: Calculus, Linear Algebra, Abstract Algebra, Real analysis, Probability/Limit Theorems, Numerical analysis, Complex Variables, Mathematical analysis, Ordinary Differential Equations, Partial Differential Equations, Topology, Number Theory

Volunteer Experience

- **Participated as a judge** in Math and Science fair at Hassan Kassir High School, 2018
- **Participated** in Hult Prize 2018 competition organized by: Hult International Business School, United Nations (UN) and EF Education First
- **Participated as a volunteer** in Nerd16 robots for nature, 2016
- **Participated** in the 20th Annual Science, Math and Technology, 2014
- **Participated** in the Science Fair at the American University of Beirut, 2012
- **Participated** in a Science competition organized by National Association for Science and Research.
- **Participated** in the First Lego League championship (FLL) in robotics

Awards & Honours

- **Won a 60,000QAR (16,438\$)** grant from MADA Innovation Program 2022 to create “MAAN” application. “MAAN” is an innovative application designed for enhancing communication among autistic adults.
- **First place** in the campus competition for Hult Prize
- Competitor in the Lebanese national **semi-final** in Hult Prize
- **First place** in the Lebanese competition in Robot design and Programming in FLL
- **First place** in the Arab competition in Project Solution in FLL
- **First place** in international competition in Germany in Inspiration Award in FLL

Technical Proficiency

Skilled at using all Microsoft Office programs, C++/C programming, C#, Java/Object Oriented Java, VB.net, Mobile Application (Android studio, Swift, Flutter...), Python, Database, MatLab, HTML, JavaScript, CSS (Cascade Style Sheet), PHP (Personal Home Page)

Languages

Fluent in Arabic, English, and French.

Publications

- **Hijab, M. H. F.**, Banire, B., Neves, J., Qaraqe, M., Othman, A., & Al-Thani, D. (2023). Co-design of Technology Involving Autistic Children: A Systematic Literature Review. *International Journal of Human-Computer Interaction*, 1-19.
- **Hijab, M.H.F.**, Al-Thani, D., Neves, J., Al Aswadi, N., Khatab, S. (2023). Toward a Toolkit for Co-designing Collaborative Play Tool with and for Autistic Children. In: Fang, X. (eds) *HCI in Games. HCII 2023. Lecture Notes in Computer Science*, vol 14046. Springer, Cham. https://doi.org/10.1007/978-3-031-35930-9_9
- Belhaouari, S. B., **Hijab, M. H. F.**, & Oflaz, Z. (2023). Matrix approach to solve polynomial equations. *Results in Applied Mathematics*, 18, 100368.
- **Hijab, M. H. F.**, & Al-Thani, D. (2022, October). En Route to Co-designing Inclusive Play With and For Autistic Children. In *2022 9th International Conference on Behavioural and Social Computing (BESC)* (pp. 1-4). IEEE.
- **Hijab, M. H. F.**, Banire, B., & Al-Thani, D. (2022, June). Multisensory Collaborative Play: Online Resources for Parents of Children with Autism Spectrum Disorder. In *HCI in Games: 4th International Conference, HCI-Games 2022, Held as Part of the 24th HCI International Conference, HCII 2022, Virtual Event, June 26–July 1, 2022, Proceedings* (pp. 427-443).
- **Hijab MHF**, Al-Thani D, Banire B. A Multimodal Messaging App (MAAN) for Adults With Autism Spectrum Disorder: Mixed Methods Evaluation Study. *JMIR Form Res.* 2021;5(12):e33123.
- Khowaja K., Al-Thani D., Abdelaal Y., Hassan A.O., Mou Y.A., **Hijab M.H.** (2021) Towards the Mixed-Reality Platform for the Learning of Children with Autism Spectrum Disorder (ASD): A Case Study in Qatar. In: Fang X. (eds) *HCI in Games: Serious and Immersive Games. HCII 2021. Lecture Notes in Computer Science*, vol 12790. Springer, Cham. https://doi.org/10.1007/978-3-030-77414-1_24