# Ibrahim Moazzam

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## EDUCATION

**University of Michigan**                                                                                                        **Ann Arbor, MI**
**Master of Science in Information: User Experience Research and Design**                                          *May 2025*
- CGPA: 3.95/4.00
- Relevant Coursework: Advanced User Research in the Field, Needs Assessment and Usability Evaluation, Contextual Inquiry and Consulting Foundations, Fundamentals of Human Behavior, Interaction Design Studio, Designing Consumer Health Technologies, Web Design: Responsiveness and Accessibility, Intro to Accessibility, Graphic Design

**Lahore University of Management Sciences (LUMS)**                                                         **Lahore, Pakistan**
**Bachelor of Science in Computer Science**                                                                                     *June 2023*
- CGPA: 3.90/4.00
- Graduated with High Distinction and placed on the Dean's Honour List from 2019–2023
- Relevant Coursework: Advanced Programming, Software Engineering, Operating Systems, Data Structures, Algorithms

## SKILLS

**Languages & Frameworks:** JavaScript, TypeScript, HTML, CSS, Python, React, Next.js, Node.js, Django, Flask
**Tools & Libraries:** Figma, Git, Storybook, Lighthouse, WAVE, aXe, Jira, Trello, Qualtrics
**Development Practices:** Responsive Design, REST APIs, Accessibility Audits (WCAG 2.2), Usability Testing, A/B Testing

## WORK EXPERIENCE

**LearningClues**                                                                                                                      **Ann Arbor, MI**
**Frontend Engineer | UX Research & Accessibility**                                                        *May 2024 — Present*
- Drive product improvements for the Mobile App by uncovering gaps and opportunities through generative and evaluative research, including competitive analysis, 15 user interviews, 2 surveys, and 11 usability tests with students
- Develop a TypeScript-based onboarding library to deliver guided tours, improving feature discoverability and usability
- Build scalable front-end components in React and Next.js using Storybook for consistent cross-platform functionality
- Lead accessibility audits across all systems, ensuring WCAG 2.2 AA compliance and contributing to VPAT documentation

**University of Michigan**                                                                                                        **Ann Arbor, MI**
**Graduate Student Research Assistant** — *Peer Instruction for Undergraduate CS Education*          *May 2024 — Present*
- Resolve UI issues in the Peer Instruction (PI) interface on Runestone Academy to enhance usability and accessibility for students and instructors, under the guidance of Dr. Barbara Ericson
- Designed and implemented a novel PI analytics dashboard using React and FastAPI, equipping instructors with real-time insights into learning outcomes from their PI sessions
- Evaluate multiple LLMs and conduct prompt engineering to identify the best model for providing undergraduate CS students with a pseudo-peer in asynchronous PI sessions

**Graduate Student Instructor** — *Web Design, Development, and Accessibility*                       *Aug. 2024 — Dec. 2024*
- Attended to 114 students' queries through weekly Office Hours and Piazza for Dr. Colleen van Lent's course on developing WCAG-compliant accessible web applications using JavaScript, HTML, and CSS
- Led a discussion section of 20 students by revising lecture content and clarifying course concepts
- Reviewed and graded two exams, three assignments, and the final project to mentor students with meaningful feedback
- Conducted accessibility reviews of all course materials and handled accommodation requests for an inclusive experience

**UMSI Programming Peer Tutor**                                                                                    *Sep. 2023 — Dec. 2023*
- Guided 120+ students from SI 106, 206, 506, and 507 under the supervision of Dr. Anthony Whyte with their programming-related concepts, from Dictionaries to Graph Theory
- Worked closely with students to understand and debug their code for their weekly problem sets

**Graduate Student Instructor** — *Data-Driven Applications*                                               *Aug. 2023 — May 2024*
- Attended 240 students' queries for a second-year graduate-level course, taught by Dr. Charles Severance
- Completed 36 course assignments in Django to understand and empathize with the students' experiences
- Led discussion sections of 87 students to clarify their concepts, maintaining a 95.3% instructor satisfaction rating

**Educative**                                                                                                                      **Lahore, Pakistan**
**Technical Content Engineering Intern**                                                                          *Jun. 2022 — Aug. 2022*
- Conducted 160 hours of research within a wide range of disciplines, such as HCI, Machine Learning, Networks, NLP, Data

Structures, & Algorithms to gain a comprehensive understanding of various concepts
- Authored 28 articles to be read by technical audiences; a select few of these articles are available on Educative's <u>website</u>

## PROJECT EXPERIENCE

### The Marketplace: A Scam-Free Digital Marketplace for College Students          Aug. 2023 – Dec. 2023
*Figma, Personas, Prototyping, Wireframing, User Interviews, Usability Testing, Heuristic Evaluation*
- Conducted generative research to investigate moving-in challenges for U.S. college students by conducting three semi-structured interviews to understand the shortcomings of current digital marketplaces
- Analyzed interview data using thematic analysis to generate design insights and create user personas
- Transformed design insights into scenarios, user flows, and wireframes to build a <u>high-fidelity prototype</u> using Figma
- Evaluated the prototype using Nielsen's Usability Heuristics and incorporated feedback from two usability tests

### Portfolio Website          Aug. 2023 – Dec. 2023
*HTML, CSS, JavaScript, WAVE, aXe DevTools*
- Designed and developed a fully responsive <u>portfolio website</u> using HTML, CSS, and Vanilla JavaScript for a course project
- Integrated CSS animations and embeds in the mobile-first design to enhance the overall outlook of the website
- Complied fully with WCAG 2.1 AA standards and created alternate designs for users with reduced motion preferences

### Fact Check Web Application          Jun. 2023 – Dec. 2023
*Python, React, Beautiful Soup, Cron, AWS EC2*
- Coded a Python-based web scraper using Beautiful Soup and deployed it on an Amazon EC2 instance to fetch fact-checked articles from <u>SochFactCheck</u>
- Implemented a cron-job to translate the newly-scraped articles into Urdu through the Google Translate API and cached the results for cost-efficiency
- Established an API endpoint to efficiently serve the fetched articles in a web application for users with low digital literacy
- Developed a mobile-first React web application specifically optimized for entry-level devices by implementing server-side rendering, server-side caching, lazy-loading, and infinite scroll

### Dost: A Play-Based Approach to Teaching Computational Thinking          Jan. 2023 – Aug. 2023
*Figma, MAXQDA, Thematic Analysis, User Interviews, Prototyping, Wizard of Oz Testing*
- Identified children's knowledge of Computational Thinking (CT) by conducting 15 semi-structured interviews with nine children and six teachers from field visits to three low-cost schools in Lahore, Pakistan
- Analyzed interview transcripts using axial coding and thematic analysis to extract key design insights
- Designed a <u>gamified prototype</u> using Figma that helps children create and modify rules for physical play using CT
- Evaluated the prototype using Wizard of Oz testing with nine children, resulting in an 82% task completion rate

### Ishaara: A Gamified E-Learning Sign Language Application for Hearing Children          Aug. 2022 – Dec. 2022
*Figma, Accessibility, Contextual Inquiry, User Interviews, Storyboarding, Prototyping, Usability Testing*
- Directed a comprehensive literature review of sign language in Pakistan, which was then used to conduct eight semi-structured interviews with expert sign-language educators and parents of DHH (deaf and hard of hearing) children
- Led a contextual inquiry with 20 hearing and 12 deaf children to identify content that fostered relatability between them
- Transformed design insights from brainstorming and Crazy 8's into scenarios, user flows, and storyboards to ultimately build a tablet-based <u>high-fidelity prototype</u> that would teach children Pakistan Sign Language (PSL)
- Evaluated the prototype through usability tests with 18 students, resulting in an 84% task completion rate

### Early-Stage Diabetes Risk Prediction Classifier          Aug. 2022 – Dec. 2022
*Python, Pandas, scikit-learn, EDA*
- Curated a dataset from secondary data containing the physiological traits of 520 potential- and newly-diabetic patients and their risk of diabetes (as diagnosed by a doctor) in Bangladesh
- Performed Exploratory Data Analysis (EDA) through a correlation matrix and Pearson's correlation coefficient to identify traits significantly correlated with the outcome
- Utilized stratified cross-validation with the scikit-learn Random Forest model, achieving a test accuracy of 91% and an area under the ROC curve (AUC) of 0.978