

Javaria Hassan

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github.com/JavariaHassan
Portfolio: javariahassan.github.io

Languages and Frameworks

- **Most Experience:** Python • JavaScript • C++ • HTML5/CSS3
- **Some Experience:** Haskell • Golang • PHP • SQL
- **Frameworks:** Flask • Vue.js • Node.js • React Native

Education

Bachelor of Science in Computer Science
Lahore University of Management Sciences (LUMS)
CGPA 3.51, **Major GPA 3.76.**
Graduation with High Merit.

09/2016 – 05/2020
Lahore, Pakistan

Work Experience

- 1. Research Assistant (Remote)** 06/2020 – Present
at the **Learning, Innovation and Technology Lab** at the **Harvard Graduate School of Education**

Published Work:

- Multimodal Data Collection Made Easy: The EZ-MMLA Toolkit.
Accepted by the 11th International Conference on **Learning Analytics and Knowledge (LAK)**, 2021.
- Using Multimodal Data to Prepare the Next Generation of Data Scientists.
Accepted by the **Computer-Supported Collaborative Learning (CSCL)** in Times of Crisis Webinar Series, and the **International Journal of Computer-Supported Collaborative Learning (IJCSCL)**, 2021.

Research Projects:

Team Lead, Multimodal-Toolkit Web Application

mmla.gse.harvard.edu

Leading a team of 3 researchers to design a toolkit for collecting multimodal student data, such as body posture, gaze location, and emotion, in real-time via video and audio recordings using **JavaScript Machine Learning models**. The application is being used by 60+ Harvard graduate students enrolled in a Multimodal Analytics course.

- Developed 15/20 tools on the website using **HTML5, CSS3, Bootstrap, VanillaJS**, and **Tensorflow.js**.
- Architected and developed the backend using **Python, Flask** and **OpenCV**.
- Deployed the application on an **Ubuntu VPS** with an Apache webserver.
- Provided technical guidance and mentorship to team members.

Team Lead, Learning Portal Web Application

lp.gse.harvard.edu (Restricted to Harvard network)

Developed an educational website for a semester-long Multimodal Analytics course offered to 60+ Harvard graduate students. The website offers video lectures to students and consensually captures their body posture, gaze location, and emotion in the background.

- Built the app from the ground up within a 1-month deadline.
- Implemented **Firebase authentication** and managed a **Firebase Realtime Database** in **Python**.
- Worked with **Flask, HTML5, VanillaJS, Tensorflow.js**, and **Ubuntu VPS**.
- Currently studying the data generated to extract meaningful predictors for students' learning, and designing visualizations that present this information to teachers in a suitable way.

- 2. Software Engineer and UX Designer** 10/2020 – Present
at **Data Science Dojo**

Learning Management System Redesign

- Co-lead the redesign and redevelopment of the company's LMS using the Moodle software.
- Worked with **PHP, SQL, Azure Web Hosting** and **Azure Media Services**.
- Spearheaded all design elements, templates, and brand consistency.

<p>3. Undergraduate Research Assistant at the Technology for People Initiative Lab at the Lahore University of Management Sciences</p> <p>Project Lead, Analysis of Gender Bias in Pakistan's Print Media</p> <ul style="list-style-type: none"> Trained word embeddings on 0.2 million news articles and used vector-similarity measures to demonstrate how the Pakistani media perpetuates gender stereotypes. Worked in Google Colab and used Pandas, NumPy, Scikit-learn, and Gensim python libraries. Developed the frontend of a web application that reports on gender bias in news articles using Vue.js. <p>Team Member, Analysis of Machine-Text Generation and Discrimination Models</p> <p>Collaborated with professors from the University of Iowa to study neural language models and their potential to propagate misinformation.</p> <ul style="list-style-type: none"> Conducted a systematic analysis of reviews posted on federal agency websites and e-commerce marketplaces to examine the possibility of reputation fraud using language models. Evaluated discriminatory models on (1) text samples with various stylistic features and (2) text samples generated by differently configured models. <p>4. Selected Course Projects</p> <p>Frontend Developer, Hotel Booking Mobile Application github.com/JavariaHassan/TheDefenceClub</p> <p>Worked in a group of 5 to develop a booking application following a modified waterfall model.</p> <ul style="list-style-type: none"> Prepared software requirements specifications and software design specifications documents. Designed user interface prototypes in Adobe XD and translated them into a React Native frontend. <p>Project Lead, 3D-Sound Shooting Game for the Visually Impaired</p> <p>Worked in a group of 5 to design a mobile game for visually impaired people following a participatory design process.</p> <ul style="list-style-type: none"> Worked with 35 visually impaired participants in user research, design, and evaluation. Conducted interviews, contextual inquiry, and design workshops. Worked on low-fidelity prototyping, user flows, Unity development, and user testing. <p>5. Undergraduate Teaching Assistant</p> <ul style="list-style-type: none"> Advanced Programming Course Designed a programming exam for 156 students on asynchronous programming in Vue.js. Supported students' learning of functional programming in Haskell and concurrent programming in Golang. Introduction to Programming Course Supervised weekly labs for 100 students on programming exercises in C++. Human Computer Interaction Course Supervised classroom activities, conducted weekly progress meetings with student groups, and kept up-to-date on the class slack group. 	<p>06/2019 – 05/2020</p> <p>01/2019 – 05/2019</p> <p>09/2018 – 12/2018</p> <p>09/2018 – 12/2019</p> <p>06/2017 – 05/2020</p> <p>06/2018 – 05/2020</p> <p>09/2017 – 05/2019</p> <p>06/2020 – Present</p> <p>06/2020 – Present</p> <p>06/2020 – Present</p> <p>06/2017 – 08/2017</p>
Awards and Extracurriculars	
<ul style="list-style-type: none"> Dean's Honour List, LUMS. Creative Director, Society for the Promotion and Development of Engineering and Sciences, LUMS. Athlete, Female Basketball Team, LUMS. 	
Community Service	
<ul style="list-style-type: none"> Design Lead, Pakistani Women in Computing Organization, Lahore Chapter. Graphic Designer, Rahnumai Educational Consultant. Content Writer, SOS Children's Village Pakistan. Teacher, Seeds of Change Program. 	