Javaria Hassan

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github.com/JavariaHassan

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   09/2016 – 05/2020

Lahore University of Management Sciences (LUMS)   Lahore, Pakistan

CGPA 3.51, **Major GPA 3.76**.

Graduation with High Merit.

Work Experience

1. **Research Assistant** (Remote)   06/2020 – Present

   at the **Learning, Innovation and Technology Lab** at the **Harvard Graduate School of Education**

   Lead Developer, Multimodal-Toolkit Web Application

   mmla.gse.harvard.edu

   Leading a team of 3 developers on an application for users to collect data on body orientation, emotion, and heart rate in real-time through sensors using **JavaScript Machine Learning models**. The application is being used by 60 Harvard graduate students enrolled in a Multimodal Analytics course.
   - Developed the frontend for 11/15 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.

   Sole Developer, Learning Portal Web Application

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

   Developed an educational website for a Multimodal Analytics course offered to 60 Harvard graduate students. The website offers video lectures to students and simultaneously captures their body posture, gaze location, and emotion.
   - 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**.

2. **Undergraduate Research Assistant**   06/2019 - 05/2020

   at the **Technology for People Initiative Lab** at the **Lahore University of Management Sciences**

   Project Lead, Analysis of Gender Bias in Pakistan's Print Media
   - 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**.

Team Member, Analysis of Machine-Text Generation and Discrimination Models
Collaborated with professors from the University of Iowa to study neural language models and their potential to propagate misinformation.

- 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 stylometric features and (2) text samples generated by models with different combinations of parameter values.

3. **Selected Course Projects**

Frontend Developer, Hotel Booking Mobile Application   01/2019 - 05/2019
github.com/JavariaHassan/TheDefenceClub
Worked in a group of 5 to develop a booking application following a modified waterfall model.

- Prepared software requirements specifications and software design specifications documents.
- Designed user interface prototypes in **Adobe XD** and translated them into a **React Native** frontend.

Project Lead, 3D-Sound Shooting Game for the Visually Impaired   09/2018 - 12/2018
Worked in a group of 5 to design a mobile game for visually impaired people following a **user-centered design process**.

- Worked with 35 visually impaired participants in user research, design, and evaluation.
- Conducted interviews and worked on low-fidelity prototyping, user flows, **Unity** development, and user testing.

4. **Undergraduate Teaching Assistant**   09/2018 - 12/2019
- **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.

Awards and Extracurriculars

- **Dean's Honour List**, LUMS.   09/2017 - 05/2020
- **Creative Director**, Society for the Promotion and Development of Engineering   06/2018 - 05/2020
  and Sciences, LUMS.
- **Athlete**, Female Basketball Team, LUMS.   09/2017 - 05/2019

Community Service

- **Design Lead**, Pakistani Women in Computing Organization, Lahore Chapter.   06/2020 - Present
- **Graphic Designer**, Rahnumai Educational Consultant.   06/2020 - Present
- **Content Writer**, SOS Children's Village Pakistan.   06/2020 - Present
- **Teacher**, Seeds of Change Program.   06/2017 - 08/2017