

Murtaza Ali Baig
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Date of Birth 22 September,1993
Gender Male

Career Objective

To utilize my skills and abilities in Industry, Research and Academia with a focus on professional growth. I want to solve real world problems using my technical knowledge and research while being resourceful, innovative and flexible.

Education

MS Computer Science (Specialization: Machine Learning, HCI, Mobile Health) 2016 to 2018

Lahore University of Management Sciences (LUMS) CGPA: 3.14

Relevant Courses: Applied Probability, Data Mining, HCI, Topics in Interactive Computing

BS Computer Science (Dual Degree) 2013 to 2016

COMSATS Institute of Information and Technology, Lahore Pakistan and CGPA: 3.52
Lancaster University, Lancashire UK

Relevant Courses: Artificial Intelligence, Machine Learning

Experience

➤ **Software Engineer – OneByte LLC** July 2018 – Current

Work Domains:

Machine Learning, Data Science

➤ **Technology Officer – VizRah** June 2017 – Current

Responsibilities:

- Managing a *team of software engineers*
- Managing the processes of Requirement Gathering, Implementation and Deployment of Software and Products
- Developing *android and web applications* according to customer requirements
- Managing a team working on *Digital Marketing* of products, brands and applications using social media tools and Google's toolkit for Digital Marketing.

➤ **Teaching Assistant – LUMS** Sep 2016 – Dec 2016

Course:

Bio-Informatics

Responsibilities:

- Conducting Practical modelling sessions of Computational Biology concepts using Python Programming Language and other Com-Bio Tools
- Helping Instructor in assignment and quiz preparation and grading.

➤ **Research Associate - COMSATS Lahore** March 2016 – June 2016

Research Interests:

- Brain Machine Interfacing, Quantum AI and Robotics and Vehicular Ad-hoc Networks.

Courses Taught:

- Object Oriented Programming (Lab) and Data Structure (Lab)

➤ **Other Experience**

- Investigative Journalist and Content Writer t at Perspective
- Freelancing (Content Writing, WordPress Development, Android App Development)
- Experience of 5 years in NGO sector

Relevant Projects and Applications

1) Mobile Application (Android) related to Hepatitis and Injection Safety

App Features:

- Support of Urdu Language
- Awareness Section with (Audio, Visual and Textual Information)
- Hepatitis Screening
- Diagnostic Test based on Machine Learning
- Reminders for Medication and Appointments
- Use of Third Party Multimedia API for awareness videos (YouTube)

2) Mobile Application (Android) for gauging Depression in Users. (MS Thesis)

App Features:

- UCD Design Process
- Use of **Machine Learning** and **NLP** on data from mobile sensors and social media text
- Use of native and third-party APIs (GPS, Call and SMS, Accelerometer Facebook, Twitter)
- Use of PHQ-9 Questionnaire, Mood Scale and Digital Diary for Self-Reporting of Depression
 - Persuasive Feedback for controlling Depression
- Use of SQLite and Firebase for Data Logging

3) A News Feed Mobile Application (Android) for Multimedia Content

App Features:

- UCD Design Process
 - Use third party Retrofit API for fetching content from blog.
- Use of Content Filters and User Authentication

4) Analysis of Wine Quality Dataset from UCI Repository

Data pre-processing: Generating basic stats on missing values in the dataset, filling the missing values in the data using an appropriate filter, and standardizing the dataset to zero mean and unit variance (z-score normalization)

Dependency Analysis: Generating correlation between attributes and wine quality, and significant correlations between attributes, Computing the AUC value for each attribute and the type of wine (red or white) to identify whether a wine is red or white in the entire dataset

Feature Extraction and Dimensionality Reduction: Use of Principal Component Analysis (PCA) and Non-Negative Matrix Factorization (NNMF)

Data Visualization: Plotting results on various graphs and plots.

Tools Used: MATLAB, Python, Rapid Miner, OpenRefine

5) An Interactive Voice Response (IVR) system for spreading awareness regarding Diarrhea in rural areas (Course: Topics in Interactive Computing)

BS Final Year Project

Implementation of Quantum and Bio-Inspired Cognitive Framework for Humanoid Conscious Robots.

Brief Description: A cognitive framework for humanoid conscious agent has been developed in the project with the incorporation of philosophical duality and computational duality. For the support of Computational Duality a Quantum computing library has also been developed with the framework. Framework has been tested with very basic level of consciousness on iCub (humanoid) simulator using YARP (Yet Another Robotic Platform) middleware.

Technical Skills

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- **Programming Languages and Domains:** Android, C, C++, Java, Python, PHP, HTML, CSS, JavaScript, WordPress.
 - **Platforms:** Windows XP/98/95,2000, NT, 7, 8, 8.1, 10, Linux, Android,
 - **Other tools and technologies:** Yet Another Robotic Platform(YARP), Message Passing Interface(MPI), iCub Robot Simulator, OpenCV, Rapid Miner, OpenRefine, MATLAB

Awards and Achievements

- BS (CS) with ***Distinction*** and ***Gold Medal***
- Winner of national level IT Quiz and Programming Competition
- Various certifications of soft skills development, welfare work and extra-curricular activities

References

References will be furnished on request.