Zulfiqar Ali

Data Analyst/Researcher

🏠 Portfolio ◎ Github ✉ zulfiqar.ali01@utrgv.edu 📞 0092341-5883613

EXPERIENCE

MINISTRY OF INFORMATION & BROADCASTING(MOIB) | DATA ANALYST
March 2023 – Continue| Press Information Department, Islamabad

- ➔ Social opinion mining techniques, disinformation detection using explainable AI(XAI)
- ➔ Big Data analysis with time series data
- ➔ Multimedia data processing, mainly including image/video analysis and processing with information retrieval
- ➔ Using Generative AI to build a predictive system on large-scale scrapped data and fake news intervention
- ➔ Developed a real-time analytics dashboard using PowerBI and other JavaScript frameworks.

SEJONG UNIVERSITY | GRADUATE RESEARCH STUDENT DEPARTMENT OF OPTICAL ENGINEERING
September 2022 – February 2023| Center for Photonic Systems, Sejong University, South Korea

- ➔ Developing imaging techniques to study both cardiac and vascular disease.
- ➔ Biomedical photonic imaging
- ➔ Optical Image Processing and Evaluation
- ➔ Artificial Intelligence in micro-endoscopy imaging
- ➔ Constructing imaging signatures for various diseases and disorders serving as personalized biomarkers for precision diagnosis & predictive modeling.

NATIONAL CENTER OF ARTIFICIAL INTELLIGENCE | DEEP LEARNING & COMPUTER VISION ENGINEER
September 2021 – August 2022 | SmartCityLab, Karachi Pakistan

- ➔ 3D reconstruction, vision-based robot navigation,pose estimation
- ➔ Developed methodologies for the analysis, design, and control of autonomous systems
- ➔ Designed of robust planning and decision-making systems, which also entails developing high-dimensional deterministic or probabilistic models
- ➔ Developed the theoretical foundations for networked autonomous systems operating in uncertain, rapidly changing, and potentially adversarial environments.

COMSATS UNIVERSITY ISLAMABAD | GRADUATE RESEARCH ASSISTANT IN STATISTICAL DATA SCIENCE AND MACHINE LEARNING
September 2017 – August 2021 | Islamabad, Pakistan

- ➔ Used statistical data mining technique to collect large-scale survey dataset Hierarchical Bayesian modeling,
- ➔ Researched and studied children's behavior classification problems using semi-supervised learning techniques.
- ➔ Data preprocessing, missing value imputation on large scale data using Expected-Maximization and Bayesian algorithms.

SKILLS

PROGRAMMING
Proficient:
Python • SPSS • MATLAB

Experienced:
• LaTeX • R • SagMath • JavaScript • HTML • CSS • SQL

LIBRARIES/FRAMEWORKS
TensorFlow • PyTorch • Scikit-Learn • Pandas • opencv & MediaPipe • Dlib • Matplotlib• Numpy • Tkinter • Seaborn • Django • Fastapi • Flask • NLTk • BeautySoap • jQuery • Node.js • Bootstrap

TOOLS/PLATFORMS
Git • WordPress • Docker • Tableau • Heroku • MongoDB

EDUCATION

MASTER OF SCIENCE IN OPTICAL ENGINEERING |
August 2022 - February 2023 | Sejong University, Seoul, South Korea
Coursework in Applied Artificial Intelligence & Machine Learning

MASTER OF SCIENCE IN COMPUTATIONAL MATHEMATICS |
Sept 2018 - Sept 2020 | Comsats university Islamabad,Islamabad Coursework in Applied & computational mathematics . GPA: 3.38

BACHELOR OF SCIENCE | UNIVERSITY OF GUJRAT
Sept 2012 - June 2017 |Gujrat
Relevant coursework completed in mathematics, statistics, and scientific programming. GPA: 2.81

COURSEWORK
Computer Applications • • Information Systems • Programming Language for Mathematicians • Data Structures & Algorithms • Computational Linear Algebra • Numerical Computations • Fluid Dynamics • Probability and Statistics

LANGUAGES

Fluent
BALTI | URDU | HINDI | ENGLISH

PROJECTS

EmotionRecognition | RESEARCH WORK -CONTINUE

- ➔ Working on emotion recognition systems with context.

- ➔ Deep feature generation and classification of emotion from the face data.

- ➔ Kinematic approach modeling of the human body to identify posture correctly

AI AutomationBot | PYTHON AND REACT -CONTINUE| 2023

- ➔ Developing and Automation Bot to monitor Social media in real-time

- ➔ Web Scrapping to extract large scale data for predictive modeling

- ➔ Real time Analytics

BioMedical Imaging | SURVEY ARTICLES -2022

- ➔ Deep learning models for microscopic imaging

- ➔ Meta-heuristic algorithms in image processing

AgriDeepNet | REACTJS AND PYTHON - 2022

- ➔ Machine learning based web application build using React and Flask.

- ➔ AgriDeepNet is used for recommending Crop and Fertilizers based on the soil features with remarkable performance of Deep neural network architecture.

- ➔ React JS is used to build the frontend part of the application.

- ➔ Flaskapi used as endpoints.

AIChatBot | PYTHON REACTJS - 2022

- ➔ Develop a chat bot web application using ReactJs, Python Flask, and Chatterbot.

3DImageSeg | PYTHON - 2020

- ➔ Semantic segmentation using deeplab.

- ➔ Tkinter-based GUI.

Portfolio & cv | REACTJS, BOOTSTRAP, NETLIFY,CSS - 2019

- ➔ Create a responsive portfolio using the latest web frameworks react,Bootrap4, Material UI.

- ➔ Showing skills description and skill sets with repository links. [Link].

- ➔ CV format designed in Latex.

RESEARCH & PUBLICATIONS

A Survey on Lungs Nodule Segmentation and Classification- In progress
A Survey on Automatic Segmentation of Biomedical retinal image Segmentation - In progress
Children's Behavior classification Problem using Machine learning Source code
Sentiment analysis Web App Using Python and React WebLink

2D-Heat diffusion modeling and simulation using MATLAB.

CERTIFICATION COURSES & WORKSHOPS

- ➔ Data Science Workshop on Analysing PUBG Data
- ➔ DevOps workshop on Reboot the Web Landscape with DevOps and Cloud
- ➔ Deep Learning Specialization
- ➔ IBM Machine Learning Professional Certificate
- ➔ Fundamentals of Scalable Data Science
- ➔ Full Stack Web Development with Angular Specialization
- ➔ Introduction to Programming with Python and Java Specialization
- ➔ Advanced Data Science with IBM Specialization
- ➔ Advanced Machine Learning and Signal Processing.
- ➔ Advanced Machine Learning Specialization
- ➔ Front-End Web UI Frameworks and Tools: Bootstrap 4
- ➔ Introduction to Programming with Python and Java Specialization
- ➔ Exploratory Data Analysis for Machine Learning IBM
- ➔ Deep Learning and Reinforcement Learning IBM
- ➔ Deep Learning in Computer Vision HSE University
- ➔ Natural Language Processing with Classification and Vector Spaces DeepLearning.AI
- ➔ 4th International Conference on Image Processing and Machine Vision.

REFERENCES

Saqlain Raza, Imam Abdulrahman bin Faisal University Kingdom of Saudi Arabia
✉ srrhussain@iau.edu.sa
Tayyab Nawaz, University of Illinois at Urbana-Champaign USA
✉ tnawaz2@illinois.edu

Asad Shabbir, Press Infomation Department (PID), Government of Pakistan
✉ assads1@gmail.com

EXTRACURRICULAR ACTIVITIES

- ➔ Gym fitness freak and badminton player at the inter-university level.
- ➔ Directing and advising junior graduate and undergraduate students in Thesis and Final year projects related to Machine learning, Computer vision, and Data mining.
- ➔ Rock climbing, reading technology blogs.