

Abdur Rahman

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Education

2023–2025 Master of Science in Applied Statistics

King Fahd University of Petroleum and Minerals (KFUPM), Dhahran, Saudi Arabia

CGPA 3.625/4.00

Thesis: Geospatial and Machine Learning Mortality Modeling of MENA Countries

2018–2022 Bachelor of Science -Statistics

The Islamia University of Bahawalpur, Pakistan

CGPA 3.93/4.00

Research Interest

- Mortality modeling and forecasting
- Geospatial statistics
- Machine learning applications in demography
- Survival analysis and statistical modeling

Publication*

- **Published:** Rahman, A., Omar, M. H., Mahmood, T., Abbas, N., Riaz, M., & Ramzan, N. (2025). Water level forecasting in coastal cities using a hybrid deep learning approach. *Science of The Total Environment*, 1003, 180709.
<https://doi.org/https://doi.org/10.1016/j.scitotenv.2025.180709>
- **Published:** *On Designing EWMA Charts to Model Demographic Trends with Generalized Extreme Value Distribution.* (Presented at the IWSM 2025 Conference)
<https://iwsm2025.ie/p52/>
- **Submitted:** *Optimizing Demographic Surveillance using GEV Control Charts: An Advanced Approach for Monitoring Fertility Trends.*
- **Submitted:** A Generalized Extreme Value CUSUM Framework for Detecting Shifts in Infant Mortality Trends: Advancing Public Health Surveillance.
- **Submitted:** Hybrid Residual Learners Framework for Mortality Forecasting: Integrating Lee-Carter, Renshaw-Haberman and Machine Learning Models in the MENA Region.

Work Experience

King Fahd University of Petroleum & Minerals -KFUPM

1. R Language Lab Instructor

August 2024 – Present

2. Python Language Lab Instructor

January 2024 - June 2024 (6 months)

3. Teacher Assistance

October 2023-January 2024 (6 months)

4. Lister (Data Collector)

April 2022-June 2023 (3 months)

Planning & Development Board (P&D Board) Lahore, Punjab, Pakistan

Term projects

- Evaluating Optimal Techniques for Data Fitting and Forecasting: Identifying the Best Approach for Accurate Energy Consumption Prediction by using different Machine Learning approaches. <https://shorturl.at/nyc44>
- Statistical Analysis of Imbalanced Classification with Training Size Variation and Subsampling on Datasets of Research Papers in Biomedical Literature. <https://shorturl.at/b2vp7>
- Completely Randomized Block Design for Evaluating the Impact of Parental Satisfaction, Absenteeism, and Subject Choice on Student Performance with Gender as a Blocking Factor. <https://shorturl.at/zF0hA>

Conferences

- **Poster Presenter**, IWSM 2025 *39th International Workshop on Statistical Modelling*, Limerick, Ireland.
- **Participant**: GSR Conference 2025 3-day international conference on disruptive technologies.
- **Participant**: Math Connect 2024 – 3-day conference on statistical and mathematical methods.

Referees

- **Dr. Muhammad Riaz** (Professor)
riazm@kfupm.edu.sa
- **Dr. Mohammad Hafidz Omar** (Associate Professor)
omarmh@kfupm.edu.sa
- **Dr. Nasir Abbas** (Associate Professor)
nasirabbas@kfupm.edu.sa
- **Dr. Muhammad Daniyal** (Biostatistician)
muhammad.daniyal@almoosahealth.com.sa