

# QAMAR ALI

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## Education

### Master of Philosophy in Statistics

Quaid-i-Azam University

Sept 2020 – Dec 2022

Islamabad, Pakistan

**Thesis Title:** "Joint monitoring of the process mean and variance with maximum dual CUSUM chart"

### Bachelor of Science in Statistics

Quaid-i-Azam University

Sept 2016 – Aug 2020

Islamabad, Pakistan

**Major Subject:** Computational Statistics, Categorical Data Analysis, Time Series Analysis and Forecasting, Statistical Inferences, Regression Analysis, Statistical Quality Management, Bayesian Statistics, Probability & Probability Distribution, Stochastic Processes, Sampling Techniques, Biostatistics, Nonparametric Statistics, Operation Research, Design and Analysis of Experiment

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## Experience

### Internship - Data Analyst

COMSATS University

May 2023 – Present

Islamabad, Pakistan

- Collaborate with Mathematics department, Engaged in an intensive skill development program aimed at enhancing proficiency in data analysis and project management
- Assist in data analysis, research, record maintaining, etc
- Collaborate with colleagues to troubleshoot issues related to statistical data analysis algorithms and find solutions

### Fiverr - Data Analyst Projects

Freelancer

July 2020 – May 2023

Islamabad, Pakistan

- **The Impact of the Covid-19 Pandemic on the global economy**  
In this Project, I studied the spread of covid-19 among the countries and its impact on the global economy using Python.
  - **Covid-19 Impacts Analysis on KSA using R**  
This analysis aimed to provide a detailed understanding of the pandemic's effects on various sectors and facets of life within the Kingdom.
  - **Stock Market Performance Analysis**  
This project involved calculating moving averages, measuring volatility, conducting correlation analysis and analyzing various aspects of the stock market to gain a deeper understanding of the factors that affect stock prices and the relationships between the stock prices of different companies.
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## Modelling Skills

### Regression Models

- Linear Regression, Multiple Regression, Polynomial Regression, Logistic Regression, Poisson Regression, Ridge Regression and Lasso Regression, Nonlinear Regression, Robust Regression, Hierarchical Regression.

### **Time Series Models**

- Autoregressive (AR) Model, Moving Average (MA) Model, Autoregressive Integrated Moving Average (ARIMA) Model, Seasonal Autoregressive Integrated Moving-Average (SARIMA) Model, Exponential Smoothing (ETS) Models, Vector Autoregression (VAR) Model.

### **Survival Analysis Models**

- Cox Proportional Hazards Model, Kaplan-Meier Estimator, Accelerated Failure Time (AFT) Model, Parametric Survival Models (e.g., Weibull, Exponential, Log-Normal), Competing Risk Model.

### **Machine Learning Models**

- Decision Trees, Random Forest, Support Vector Machines (SVM), Clustering Algorithms (e.g., K-Means, Hierarchical Clustering), K-Nearest Neighbors (KNN).

### **Dimensionality Reduction Models**

- Principle Component Analysis (PCA), Factor Analysis (FA).

### **Hypothesis Testing Models**

- T-Tests, ANOVA, Chi-Square, MANOVA.

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### Research Publication

- **Publication in SPC (QTQM)**

- \* A. Haq and Q. Ali, "A maximum dual cusum chart for joint monitoring of process mean and variance," Quality Technology & Quantitative Management, pp. 1–22, 2023. DOI: <https://doi.org/10.1080/16843703.2023.2193769>

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### Skills

**Statistical Software:** Proficient in R, Python, Sql, Latex/Overleaf, Office, SPSS, Julia learning in process

**Tools:** Jupyter Notebooks, Anaconda, VS Code, R Studio

**Languages:** English, Urdu, Hindko