MD FARUK HASAN

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Key Professional Achievements

- Diverse experience in **FMCG, HealthTech and Finance**, collaborating with **local and international teams** across **Marketing, Sales, Supply Chain, Finance** etc. to generate strategic business insights.
- Oversaw supply chain operations, analytlcs, governing BI solutions for a business worth **1 billion BDT**, managing brands such as **Savlon, Freedom and Colgate.**
- Developed a forecasting model for ACI Limited, improving **supply chain accuracy by 10-15%**, resulting in savings of **approx. 110 - 218 million BDT.**
- **Led data analytics and BI team** and developed Standard Operating Procedures (SOPs) for a data-driven business, including **strategy building** and conducting **training** sessions.
- SME Loan for a certain limit for IDLC finance PLC has been sanctioned by the machine learning model built by me independently which is vetted by consultants from **IFC (international Finance Corporation)** has seen a **6% NPL** difference, resulting in reduction of about **104 million BDT** of bad loans.
- Independently built a fraud detection model and **BI module** for Milvik BIMA, which has been implemented globally, generate analytics for **Cambodia, Ghana, Indonesia, Pakistan, Philippines, Sri Lanka and Tanzania.**

Professional Experience

DBH Finance PLC
Dhaka, Bangladesh
Data Scientist manager, Data Analytics
May 2025 – Present

- Designing a **centralized data warehouse** to integrate customer, transactional and operational data with defined **ETL pipelines, data dictionary** and governance processes to kick-off the analytics team in DBH finance with collaboration with IT team.

- Developing a highly explainable credit risk scorecards and PD/LGD models using **Support Vector Machine** to enhance borrower risk assessment and ensure regulatory compliance.

- Collaborating with business and IT teams to embed analytics into decision-making processes and building dashboards and reports for better results.

IDLC Finance PLC
Dhaka, Bangladesh
Lead Data Scientist, Credit Analytics, Credit Risk Management-SME
July 2023 – May 2025

- Led the **data analytics and BI team**, developed **Standard Operating Procedures (SOPs)** for a data-driven business, implemented **data governance** for the **IDLC credit analytics team**, and facilitated **training sessions** to align data strategies with business objectives.

- Drive the **development and implementation of BI solutions** and analytics to enhance risk management, improve team performance and propose strategies for optimizing processes and decision-making.

- Developed and **implemented a robust credit risk management model** using **Logistic Regression/XGBoost,** integrating customer behavior data to accurately assess and mitigate credit risks. Also employed Binning process Based on **CART** and utilizing a highly efficient data **imputation** model.

- Designed and maintained **interactive dashboards** utilizing **R Shiny** (Dockerizing the RShiny application to make it usable for end users) and **Power BI** to deliver comprehensive insights and visualizations to stakeholders, enabling effective decision-making and enhancing data-driven strategies.

- Introduced **SQL** to the credit analytics team and built various **ETL processes** to optimize the entire data workflow.

- Constructed different **Statistical Methods** within the financial domain to effectively **assess business risk**, e.g. portfolio

volatility (**Multivariate GARCH), Hidden Markov Model etc.**

- Established a comprehensive credit analyst **performance evaluation system**, circulated automatically via email along with detailed excel reports to the stakeholders.

- Conducted comprehensive **Carbon Footprint and sustainability analyses** to assess and improve environmental financial impact.

BIMA MILVIK [MILVIK Bangladesh Limited]
Commercial Analyst, Planning & Analysis

Dhaka, Bangladesh
May 2022 - June 2023

- Conducted **Cohort & Churn analysis** for subscribers including understanding churn patterns and **Prediction** of customer churn using **Survival Analysis** technique.

- Prepared various **reports (sales, revenue, forecast, performance**, etc.), **dashboards (Churn, app performance, forecast) by Power BI & Tableau** and analytics using **R, Python, Power BI, Tableau, RShiny, Looker Studio, and MS Excel** for a subscription-based business that provides cost-effective digital health solutions to millions of low-income people in 10 countries.

- Developed and executed a comprehensive **end-to-end statistical analysis**, utilizing advanced techniques to identify **key variables (sales performance, marketing strategy, etc.) highly correlated with revenue.**

- Developed and deployed a **revenue time series forecasting model** utilizing **Prophet/LSTM/MLP**, integrating diverse data sources and advanced statistical techniques to accurately predict future revenue trends for informed decision-making.

- Designed a **research methodology** for a **market survey** to predict the **behavior** of Milvik Bangladesh customers, including research design, sample survey, sample design, and questionnaire.

- Developed a complete **automated project** that runs on an **hourly/daily basis** to retrieve targeted potential customers and reach individuals using R programming and MySQL.

- Analyzed **the performance of the sales force** and prepared incentive reports periodically for individuals based on different criteria and made comparisons using the **DEA and SFA models.**

ACI LIMITED PLC
Supply Chain Analyst, Corporate Supply Chain

Dhaka, Bangladesh
February 2020 - May 2022

- Coordinated Supply Chain KPIs, as well as **Demand, Production, and Distribution Planning** for the **Toiletries & Hygiene** Business of ACI Limited during the COVID-19 pandemic. This included brands such as **"Colgate", "Savlon" and "Freedom"**. Took responsibility for and assisted in analyzing, planning, strategizing and tracking businesses generating about **"1 billion BDT"** in revenue.

- Developed a **Time Series Forecasting** analysis using "R" with comparing models such as **ARIMA, ETS, MLP & ELM** to assist Demand Planning to smoothen operations in critical COVID and post-pandemic times, which increased Demand Plan Accuracy by **10%-15%** (on average).

- Analysis of Variance (ANOVA) to compare **performance across different suppliers and production batches**. Utilized probability distributions and control charts to improve **lead time variability and quality control issues.**

- Created an End-to-End **Distribution Dashboard and Allocation Dashboard** to maintain proper stock replenishment.

- Devised a Statistical process and system to identify the risk areas highly correlated with **wrong replenishment** and **low production performance**, and circulated Day coverage, Production scheduling reports.

- Assisted the Supply Chain team to prepare, organize, and conduct **S&OP meetings**.

EDUCATION

JAHANGIRNAGAR UNIVERSITY   Dhaka, Bangladesh
    M.Sc. in Statistics   July 2022
    CGPA: 3.34/4.00
    Project Report: On the Evaluation of Machine Learning Models to Predict Infant Mortality in Bangladesh
    Advisor: Dr. Rumana Rois

Gather key skills in Advanced Multivariate Analysis, Advanced Classical and Bayesian Inference, Sample Survey, Applied Stochastic Process and Stochastic Simulation, Generalized Linear Models, Epidemiology and Survival Analysis, Environmental Statistics etc.

JAHANGIRNAGAR UNIVERSITY   Dhaka, Bangladesh
    B.Sc. in Statistics   April 2019
    CGPA: 3.38/4.00
    Final Two Years Average: 3.55/4.00

Gather key skills in Statistical Inference, Multivariate Analysis, Categorical Data Analysis, Time Series Analysis, Analysis of Variance, Operations Research, Stochastic Process, Epidemiology and Biostatistics, Quality Control and Applied Statistics, Probability Distribution etc.

PUBLICATION

Rois, R., Hasan, F., & Yasmin, M. N. (2022). *Prediction of Infant Mortality in Bangladesh Using SVMs.* Research & Reviews: Journal of Medical and Health Sciences, 11(3), 25-33. e-ISSN: 2319-9865, p-ISSN: 2322-0104.

Software used: RStudio, R, Python, SPSS, Microsoft Excel
https://www.rroij.com/open-access/prediction-of-infant-mortality-in-bangladesh-using-svms.php?aid=90521
Evaluates the performance of machine learning methods i.e., Decision Tress, Random Forest, SVM etc. on infant mortality by analyzing the Bangladesh Demographic & Health Survey Data.

PROJECTS

- **Credit Risk Modelling using ML**

Programming used: Python
Developed ML credit model reducing bad loans by 104M BDT with 6% lower NPL
Demo Case Study: *https://github.com/farukhasan/credit-risk-ml-modelling*

- **Vibe AI: AI Music Recommender**

Programming used: R, RShiny
A Shiny web application for personalized music recommendation built with R
Vibe AI App link: *https://farukhasan.shinyapps.io/vibe_ai/*
Project Link: *https://github.com/farukhasan/shiny-vibe-AI-music-recommender*

- **E-commerce A/B Testing Analysis: A Statistical Approach**

Programming used: R
This is a statistical analysis of an A/B testing experiment to evaluate the impact of website variant changes
Project link: *https://github.com/farukhasan/ecommerce-ml-AB-testing*

- **Time Series Analysis & Forecasting**

Programming used: R
End to end project for Analysis and forecasting U.S. electricity generation patterns using 24 years of monthly
Project link: *https://github.com/farukhasan/time-series-forecast-ml-models*

- **Corporate Sales Rshiny BI Dashboard**

Programming used: R, RShiny

A sales analytics dashboard built with R Shiny that provides interactive visualizations and insights
Vibe AI App link: *https://farukhasan.shinyapps.io/ShinyUp/*
Project Link: *https://github.com/farukhasan/shiny-business-sales-BI-dashboard*

- **Demand Plan Forecasting**

Programming used: Python
End to End Forecasting model improving accuracy 15% with $1.3M+ annual savings
Demo Case Study: *https://github.com/farukhasan/Demand-Plan-TS-Forecasting-MLP-ELM-ARIMA*

- **High-Value Restaurant Identification**

Programming used: R
K-means clustering to prioritize supervision for food delivery partners
Case Study: *https://github.com/farukhasan/restaurant-performance-clustering-analysis*

- **Temperature and Rainfall Forecast of Bangladesh**

Software used: RStudio, R, Python, Microsoft Excel
Conducted time series analysis of temperature and rainfall patterns in Bangladesh over a 100-year period, applying various statistical and neural network models to forecast future trends and patterns.

- **Text Mining based on the historical data of the News Paper "Dhaka Tribune".**

Software used: R, Python
https://farukhasan.wixsite.com/portfolio/post/the-story-of-keyword

- Twitter Mining to create and analyze Word Networks based on keywords.

Software used: RStudio
https://farukhasan.wixsite.com/portfolio/post/twitter-text-mining-with-r-word-network-and-word-cloud

- Maven Space Challenge

Software used: Microsoft Power BI
An Interactive dashboard visualizing the rocket launches into space over the years.
https://farukhasan.wixsite.com/portfolio/post/maven-space-challenge

- Sleeping Pattern Analysis based on Cluster Sampling

Software used: SPSS, Google Sheet, R
Sleeping Pattern Analysis of the Students of Jahangirnagar University based on Cluster Sampling.

TECHNICAL SKILLS

- **Analytics:** Microsoft Excel, Google Sheet, RStudio, SPSS, Minitab, JASP, Jamovi, MATLAB, SAS

- **Visualization:** Microsoft Power BI, Looker Studio, Tableau, Kepler

- **Programming Language:** R, Python

- **Query Language:** MSSQL, PostgreSQL, MySQL, BigQuery

- **Others:** Adobe Illustrator, Adobe Photoshop, Figma, Microsoft Office, Google Workspace, HTML

ACHIEVEMENT/CERTIFICATION

- **Machine Learning with R** June 2023
  IBM (Cognitive AI)
  Detailed Course & Labs on Machine Learning with building end to end projects using machine learning models.
- **MS EXCEL** Feb 2024
  TestDome
  Ranking in the top 10% Feb 2024
- **SQL** Feb 2024
  TestDome
  Ranking in the top 10%
- **Training by ACI Limited:** Participated in different training courses offered by ACI limited E.g. Data Visualizations, Introduction to Power BI, Advanced Microsoft Excel, Effective Communication.
- **Google Analytics for beginners** June 2019
  Google