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, analytics, 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

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

• 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, ensuring data integrity and empowering teams to leverage insights for strategic decision-making.

• 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** leveraging statistical and machine learning techniques (Logistic Regression/XGBoost), integrating customer behavior data to accurately assess and mitigate credit risks. Also employed Binning process Based on CART and utilizing MICE/ Amelia for missing data imputation.

• Proficiently 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.

• Constructed and evaluated diverse **correlation models** within the financial domain to effectively **assess business risk**, employing **advanced statistical techniques** and financial data analysis methodologies.

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

• Established a comprehensive credit analyst **performance evaluation system**, disseminated 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]

Dhaka, Bangladesh
May 2022 - June 2023

Commercial Analyst, Planning & Analysis

• Prepared various **reports (sales, revenue, forecast, performance**, etc.), **dashboards (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 **Facebook's Prophet**, 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

Dhaka, Bangladesh
February 2020 - May 2022

Supply Chain Analyst, Corporate Supply Chain

• 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 and 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

• Identifying high value restaurant using machine learning for a food delivery company
Software used: R, RStudio, Google Sheet
Effectively identified high-value restaurants requiring direct supervision by the global team for a multinational food delivery organization through the implementation of K-means clustering, enabling targeted monitoring and optimization strategies for enhanced operational performance.

• 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.

• Twitter 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-keywords.

• Keyword analysis to create word cloud, make assumptions on different perspectives i.e., Crimes in Bangladesh.
Software used: RStudio

• 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.

• 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

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 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