

# Syif M. Bhuiyan

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**LinkedIn:** [linkedin.com/in/syif-m-bhuiyan-a7250a119](https://www.linkedin.com/in/syif-m-bhuiyan-a7250a119) | **Portfolio:** [syifbhuiyan.github.io](https://syifbhuiyan.github.io)

## Research Interests

**Primary Focus:** Computational Social Science, Algorithmic Accountability, Information Ethics (FAcCT).

**Secondary Focus:** Platform Economics, Human-Centered AI, Digital Discourse Analysis.

- **Goal:** To bridge the gap between technical data science and social inquiry, applying methods like regression analysis, bias auditing, and causal inference to understand how information systems impact society.

## Education

**Southeast Missouri State University** | Cape Girardeau, MO, USA | *Bachelor of Science (B.Sc.) in Economics & Finance* | Aug 2012 – Jan 2017

- **Major GPA:** 3.27/4.0

## Research Experience

**Project: Algorithmic Fairness & Information Asymmetry in Digital Finance** | *Independent Researcher* |  
*Auditing fintech credit scoring models for gender bias using the Home Credit Default Risk dataset.*

- **Research Question:** How do automated decision systems penalize marginalized groups, and can this be mitigated without compromising model utility?
- **Methodology:** Replicated a credit scoring pipeline using **Python (Scikit-learn)** and applied **Microsoft's Fairlearn** toolkit to audit for "Demographic Parity" constraints.
- **Key Findings:** The baseline Logistic Regression model predicted "High Risk" for 90.5% of males vs. 14.0% of females. By applying a ThresholdOptimizer, the selection rate was equalized to ~41.6% for both groups.

**Project: The Airbnb Effect: Impact on NYC Housing Markets** | *Independent Researcher* |  
*A Computational Social Science investigation into platform economics.*

- **Methodology:** Built a data pipeline merging Inside Airbnb listing data with Zillow Housing Value Indices (ZHVI) across 164 neighborhoods. Utilized **OLS Regression** in **Python (Statsmodels)** to quantify correlations.
- **Key Findings:** Established a statistically significant relationship ( $P < 0.000$ ) where every new Airbnb listing correlated with a \$585 increase in average annual home values, explaining ~10% of price variance ( $R^2 = 0.097$ ).

**Project: Automated Sentiment & Theme Extraction from Social Media** | *Independent Researcher* |  
*Natural Language Processing (NLP) pipeline for unstructured text analysis.*

- **Methodology:** Developed a pipeline using **Python (NLTK, VADER, Gensim)** to clean unstructured comments. Applied **Latent Dirichlet Allocation (LDA)** to extract latent discourse topics without prior labeling.
- **Key Findings:** Challenged assumptions of negative social media bias by identifying a 53.2% positive sentiment dominance in the corpus. Successfully clustered "messy" text into coherent topics (Celebration, Connection, Gratitude).

## Professional Experience

**WeGro Technologies Ltd.** | Dhaka, Bangladesh *Project Manager (Agri-Fintech)* | May 2022 – Sep 2023

- **Research & Grant Writing:** Authored and secured grant proposals to fund data-driven initiatives for the agriculture sector.
- **Data Integration:** Integrated external datasets using **SQL** and **Python** to improve agricultural financing models.
- **Visualization:** Designed Power BI dashboards to monitor project KPIs, increasing transparency for stakeholders.

**Self-Employed** | Dhaka, Bangladesh *Portfolio Manager* | Jan 2015 – Present

- **Quantitative Analysis:** Applied technical and quantitative analysis using **Python (pandas, scikit-learn)** and **SQL** for financial forecasting and portfolio management.
- **Strategy:** Adapted investment strategies based on macroeconomic factors and industry trends.

**British American Tobacco** | Dhaka, Bangladesh *Intern, HR & Analytics* | Nov 2019 – Feb 2020

- **Visualization:** Created Tableau dashboards to visualize performance metrics and enable data-driven adjustments.
- **Automation:** Automated weekly sales reporting using Excel VBA, significantly reducing manual work hours.

**MetLife** | Dhaka, Bangladesh *Marketing Analytics Intern* | May 2019 – Aug 2019

- **Data Analysis:** Analyzed sales data using **SQL** and **Excel** to support marketing strategies.
- **Efficiency:** Automated data processing tasks with **Python scripts** to boost accuracy and efficiency.

## Technical Skills

- **Programming & Scripting:** Python (Pandas, NumPy, Scikit-Learn, Statsmodels, Fairlearn), R, SQL (PostgreSQL, SQLite), Google Apps Script.
- **Data Analysis & Modeling:** OLS Regression, Hypothesis Testing, Causal Inference, Exploratory Data Analysis (EDA), NLP (VADER, LDA).
- **Visualization & BI:** Tableau, Power BI, Matplotlib, Seaborn, Advanced Excel (VBA, PivotTables).
- **Tools & Platforms:** Git/GitHub, JIRA, Google Data Studio.

## Certifications

- **Google Advanced Data Analytics Professional Certificate**
- **Google Business Intelligence Certificate**
- **Data Analyst Associate Certificate** (DataCamp)
- **Data Literacy Certificate** (DataCamp)

## References

- **Dr. William Weber, Ph.D.** *Professor of Economics* Southeast Missouri State University | Email: [wweber@semo.edu](mailto:wweber@semo.edu) | Phone: +1 573-651-2946
- **Dr. Mohammad Riazuddin Molla** *Professor of Mathematics* University of Dhaka | Email: [mriazmath@du.ac.bd](mailto:mriazmath@du.ac.bd) | Phone: +880 1675720553
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