

# Md. Mazharul Islam

## Curriculum Vitae

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## Education

- 2021 **PhD Student of Statistics and Data Science**, *Department of Mathematics & Statistics*, University of Nevada, Reno, NV, USA, *Fall 2021*.
- 2014 **Master of Science in Applied Statistics**, *Institute of Statistical Research and Training (ISRT)*, University of Dhaka, Bangladesh, *CGPA – 3.74 (Scale of 4.00)*.  
MS Thesis “*Modified Profile Likelihood Estimation and Inference Techniques for Survival Distributions and Models*”
- 2010-2013 **Bachelor of Science in Applied Statistics**, *Institute of Statistical Research and Training (ISRT)*, University of Dhaka, Bangladesh, *CGPA – 3.64 (Scale of 4.00)*.  
BS Project “*An Evaluation of Conventional Sample Selection Procedure and a Suggestion as well as Justification of Response Based Selection Procedure*”

## Professional Experience

- Mar,2019-  
Aug, 2021 **Research Associate**, *Research Unit*, Bangladesh Institute of Governance and Management, Dhaka, Bangladesh.  
(On study leave) My area of research was development and application of quantitative techniques to improve health outcomes. I also worked with environment and public policy related research groups. Besides, I was course co-director and trainer of data analytic courses in R and Python.
- Aug,2018-  
Feb,2019 **Data Scientist**, *Insightin Technology*, Dhaka, Bangladesh.  
My responsibilities were to extract data from different reports and web sources, storing in database using SQL, applying machine learning and time series methods to make predictions, developing codes in R and Python, interactive visualization using Microsoft Power BI. I have also worked for developing a Plan Recommendation System there.
- Jan,2018-  
Jul,2018 **Statistician & Project Manager**, *Eusuf and Associates*, Dhaka, Bangladesh.  
I worked under the project entitled “Household Survey (Panel Survey: 2018): an Impact Assessment of Urban Primary Health Care Service Delivery Project (UPHCSDP)” funded by Asian Development Bank. My major responsibilities were to extract data from smartphone-based data collection platform, cleaning of the data, analysis of the data using STATA and R.
- Jun,2016-  
Dec,2016 **Statistician**, *National Institute of Mental Health*, Dhaka, Bangladesh.  
I worked under the project entitled “Community Survey of Symptoms Presentation of Common Psychiatric Disorders”. My responsibilities were cleaning of the data, analysis of the data and preparing of draft report of the survey.
- May,2015-  
Jun,2016 **Senior Research Assistant**, *Nutrition Program Evaluation Unit, NCSD (old CNFS)*, ICDDR,B, Dhaka, Bangladesh.  
I worked under the project entitled “Assessing Coverage, utilization, and Barrier to Coverage in the BRAC Home Fortification Program in Bangladesh” and “Piloting Job Aids and User-Friendly Product Presentations in Amoxicillin Dispersible Tablets for Treatment of Childhood Pneumonia”. My major responsibilities were monitoring quality of the data, data cleaning, developing analysis code in R and analysis of the data.

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## Courses Taken

- 1 Data Analytics in R and Python. Co-director and trainer, Bangladesh Institute of Governance and Management
- 2 Hands-On Quantitative Analysis for Executives. Assistant director and trainer, Bangladesh Institute of Governance and Management

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## Research Grants

- 1 Islam MM, Islam MM, Rahman MT (2020). *Web Application for Early Detection of Hypertension Using Machine Learning Algorithm: A Case of Bangladesh*. Innovation Fund, ICT Division, Government of Bangladesh.
- 2 Islam MM, Islam MM, Zahan F and Bulbul N (2019). *Glass Ceiling Faced by Women at Workplace: Bangladesh Public Sector Perspective*. Bangladesh Institute of Governance and Management.

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## Awards

- 1 Graduate Dean's Fellowship. University of Nevada, Reno, NV, USA.

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## Research Publications

### Journal Article

#### *Published/Accepted*

- 1 Khan JR, Sultana A, Islam MM and Biswas RK (2021). *A negative association between prevalence of diabetes and urban residential area greenness detected in nationwide assessment of urban Bangladesh* **Scientific reports**, 11(1), 19513 (Nature)
- 2 Khan JR, Biswas RK and Islam MM (2021). *Relationship between blood pressure and body mass index in young adult population: A national-level assessment in Bangladesh*. **British Journal of Nutrition**,1-20 (Cambridge University Press)
- 3 Islam MM, Khan JR, Kabir A, Khan DMJR and Islam MM (2021). *Associations of Socio-Demographic and Environmental Factors with the Early Development of Young Children in Bangladesh* **International Journal of Early Childhood**, 53, 175–196 (Springer Nature)
- 4 Islam MM and Shamsuddin R (2021). *Explaining diagnostic CNN concepts to promote personalized health management for predicting hypertension* **Array**, 12, 100090 (Elsevier)
- 5 Islam MM, Islam MM, Ahmed F, & Rumana AS (2021). *Creative social media use for Covid-19 prevention in Bangladesh: a structural equation modeling approach*. **Social Network Analysis and Mining**, 11(1), 1-14 (Springer)
- 6 Hossain S, Islam MM, Khokhon A and Islam MM. (2021). *On Prevention of Diarrheal Diseases: Assessing the Factors of Effective Handwashing Facility (EHF) in Bangladesh*. **Journal of Population and Social Studies**,30, 103-115
- 7 Islam MM, Sharmin M and Ahmed F(2020). *Predicting air quality of Dhaka and Sylhet divisions in Bangladesh: a time series modeling approach*. **Air Quality, Atmosphere & Health**,1-9. (Springer Nature). <https://doi.org/10.1007/s11869-020-00823-9>

- 8 Khan JR, Awan N, Islam MM, Muurlink O F(2020). *Healthcare capacity, health expenditure, and civil society as predictors of COVID-19 case fatalities: a global analysis*. **Frontiers in Public Health**, (Frontiers). <http://dx.doi.org/10.3389/fpubh.2020.00347>
- 9 Khan JR, Islam MM, Biswas RK and Sultana A (2020). *An assessment of anemia status of child-mother pairs in Bangladesh*. **Children and Youth Services Review**, 112, 104851. DOI:10.1016/j.childyouth.2020.104851 (Elsevier).
- 10 Islam MM, Khan MHR and Hawlader T (2019). *Modified profile likelihood estimation for the Weibull regression models in survival analysis*. **Communications in Statistics - Theory and Methods**, 48(9), 2329-2343 (Taylor & Francis)
- 11 Islam MM, Khan JR and Raheem E (2017). *Bradley-Terry model for assessing the performance of ten ODI cricket teams adjusting for home ground effect*. **Journal of Data Science**, 16, 657-668.
- 12 Khan JR, Islam MM, Awan N and Muurlink O (2017). *Analysis of low birth weight and its co-variants in Bangladesh using a mixed effects model*. **BMC pediatrics**,18(1), 100 (Springer Nature).

### *Under Review/Submitted*

- 1 Khan MHR, Hawlader T and Islam MM (2021; submitted). *Battling the COVID-19 pandemic: is Bangladesh prepared?*(MedRxiv) <https://doi.org/10.1101/2020.04.29.20084236>
- 2 Islam MM, Islam MM, Zahan F and Bulbul N (2021; submitted). *Assessing workplace culture-induced incivility against women: evidence from Bangladesh civil service*.

## Contributed Software Application & Development

### R Package

- 1 Islam MM, Khan JR and Khan MHR (2017). ***mapReasy***: Producing Administrative Boundary Map with Additional Features Embedded. **Comprehensive R Archive Network (CRAN)** ([Link](#))
- 2 Islam MM and Khan MHR (2017). ***MPLikelihoodWB***: Modified Profile Likelihood Estimation for Weibull Shape and Regression Parameters. **Comprehensive R Archive Network (CRAN)** ([Link](#))

### Web Application

- 1 Deployed Neural Network model to predict hypertension on Heroku platform (2019) (using Python (flask) and HTML). Available at <https://predict-hypertension.herokuapp.com>

## Computer & Programming Skills

Operating System	Windows, Linux
Programming Language	R, Python, Stata, SPSS
Database management	Microsoft SQL
BI tool	Microsoft Power BI, Azure Machine Learning Studio

Web Design	HTML, Bootstrap
Cloud Platform	Heroku
Data Collection	Open Data Kit (ODK)

## Conference Proceedings

- 1 Islam MM and Khan JR (2015). *Assessing the performance of Top-ten cricket teams in ODI cricket: using a paired comparison model*, The Second International Conference on Statistics, December 27-29, 2015, University of Dhaka, Bangladesh.(Presented by Islam MM)
- 2 Islam MM and Khan MHR (2019). *On the Improvement of Likelihood Estimation for the Shape Parameter of Generalized Extreme Value Lifetime Distribution*, The Second International Conference on Applied Statistics, December 27-29, 2019, University of Dhaka, Bangladesh.(Presented by Islam MM)

## Online Training & Courses

- 1 Machine learning A-Z: Hands-On Python & R In Data Science. *Udemy*
- 2 Python and Flask Bootcamp: Create Websites using Flask. *Udemy*
- 3 MPN Competency: Business Intelligence for Data Analytics. *Microsoft*
- 4 MPN Competency: Data Platform & Analytics Foundational for Data Analytics Competency. *Microsoft*

## Volunteer Activity

Dec,27-29, 2014 International Conference on Applied Statistics, University of Dhaka, Bangladesh