

## Education

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### University of Washington

Seattle, USA

#### Ph.D. in Biostatistics

September 2022 - Present

- 2nd Year PhD Student.

### University of Dhaka

Dhaka, Bangladesh

#### Master of Science (M.S.) in Applied Statistics

2021 - 2023

- **M.S. Thesis:** On the estimation of robust variance in penalized GEE for nearly separated longitudinal binary data with small samples. [Supervisor: [Dr. M Shafiqur Rahman](#)]

### University of Dhaka

Dhaka, Bangladesh

#### Bachelor of Science (B.S.) in Applied Statistics

2017 - 2021

- **Relevant Coursework:** Generalized linear models; Survival Analysis; Bayesian Statistics; Time Series; Sampling Methods; Multivariate statistics: PCA, FA, Classification, Clustering; Epidemiology; Population Studies and Demography, Econometric modeling.
- **B.S. Project:** Impact of Child's Cognitive and Social-Emotional Difficulties on Child Abuse using classification trees and generalized linear models [[published](#)]

## Research Experience

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### Graduate Research Assistant and ITCR Resource Developer

September 2022 - Present

#### FH Data Science Lab, Fred Hutch Cancer Research Center

- Supervisor: [Jeffrey T. Leek](#)
- **Project 1:** Measuring Impact of software tools designed for biomedical research ([pre-print](#))
  - Development of Informatics Technology for Cancer Research ([ITCR](#)) [platforms website](#)
- **Project 2:** Development of statistically valid and efficient methods for **Inference with Predicted Data (IPD)**
  - **Publication 1:** Do We Really Even Need Data? [[arXiv preprint](#)]
  - **Software:** Co-author and developer of R-package **IPD** [[github](#)]

### Undergraduate Research Assistant

June 2020 - December 2020

#### Institute of Statistical Research and Training, University of Dhaka

- Supervisors: [Mohaimen Mansur](#) and [Iftakhar Alam](#)
- **Project:** Early Childhood Development of Bangladeshi Children

### Independent and Collaborative Research Projects

- **Project:** Analysis of treatment effect in presence of covariate-dependent missing data in Cluster Randomized Trials, mentored by [Dr. Anower Hossain](#), University of Warwick.
- **Collaborative public health project topics:** COVID-19, Intimate partner violence, women's reproductive healthcare, adolescent health.

## Publications

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### Published

- Biswas RK, **Afiaz A**, Huq S, Bhuiyan FM, Kabir E (2023). Public opinion on COVID-19 vaccine prioritization in Bangladesh: Who gets the vaccine and whom do you leave out? **Vaccine** 41(34); doi:10.1016/j.vaccine.2023.06.050
- Biswas RK, **Afiaz A**, Huq S, Bhuiyan FM, Kabir E (2023). Public opinion on COVID-19 pandemic in Bangladesh: disruption to public lives and trust in government's immunisation performance. **Int J Health Plann Mgmt** 1-16; doi.org/10.1002/hpm.3721
- Mansur M, **Afiaz A**, Hossain MS (2021). Sociodemographic risk factors of under-five stunting in Bangladesh: Assessing the role of interactions using a machine learning method **PLOS One**, 16(8), e0256729. doi:10.1371/journal.pone.0256729
- **Afiaz A**, Arusha AR, Ananna N, Kabir E, Biswas RK (2021). A national assessment of elective cesarean sections in Bangladesh and the need for health literacy and accessibility **Scientific Reports**, 11(1), 1-12. doi:10.1038/s41598-021-96337-0
- **Afiaz A**, Biswas RK (2021). Awareness on menstrual hygiene management in Bangladesh and the possibilities of media interventions: using a nationwide cross-sectional survey **BMJ Open**, 11(4), e042134. doi:10.1136/bmjopen-2020-042134
- **Afiaz A**, Masud MS, Mansur M (2021). Impact of child's cognitive and social-emotional difficulties on child abuse: Does mother's justification of intimate partner violence also play a role?. **Child Abuse & Neglect**, 117, 105028. doi:10.1016/j.chiabu.2021.105028
- **Afiaz A**, Biswas RK, Shamma R, Ananna N (2020). Intimate partner violence (IPV) with miscarriages, stillbirths and abortions: Identifying vulnerable households for women in Bangladesh. **PLOS One** 15(7): e0236670. doi:10.1371/journal.pone.0236670
- Biswas RK, **Afiaz A**, Huq S (2020). Underreporting COVID-19: the curious case of the Indian subcontinent. **Epidemiology and Infection**, 148, E207. doi:10.1017/S0950268820002095
- Biswas RK, Huq S, Afiaz A, Khan HT (2020). A systematic assessment on COVID-19 preparedness and transition strategy in Bangladesh. **Journal of evaluation in clinical practice**. 26(6):1599-611. doi:10.1111/jep.13467.
- Biswas RK, Huq S, **Afiaz A** (2020). Relaxed lockdown in Bangladesh during COVID-19: should economy outweigh health? **International Journal of Health Policy and Management**, 9(11), 488-490; doi:10.34172/ijhpm.2020.98

### Pre-prints/under review

- Hoffman K, Salerno S, **Afiaz A**, Leek JT, McCormick TH (2024) Do We Really Even Need Data? (arXiv pre-print).
- **Afiaz A**, Ivanov A, Chamberlin J, ..., Leek JT, Wright C (2023) Evaluation of software impact designed for biomedical research: Are we measuring what's meaningful? (arXiv pre-print).

## Teaching Experience

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### Graduate Student Tutor

**Institute of Statistical Research and Training (ISRT), University of Dhaka**

January 2022 - June 2022

- Mathematics and Statistics tutor for undergraduate courses: ASTAT 101: Elements of Applied Statistics; AST 102: Probability; AST 105: Calculus, AST 107: Linear Algebra, AST 201: Sampling Distributions, AST 203: Statistical Inference I; AST 204: Design of Experiments I; AST 206: Sampling Methods I.

### Online Student Instructor and Tutorial Maker

**10 Minute School**

January 2017 - December 2021

- Created **300+ video tutorials on mathematics and statistics** for national curriculum based students. Available for free on the [YouTube](#) channel of 10 Minute School.
- Conducted **10+ online Live Classes** on Facebook and [YouTube](#) teaching over a million students to date.

## Industry Experience

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### 10 Minute School (Edu-Tech)

Dhaka, Bangladesh

#### Department Lead: Quality Assurance and Control (QAC)

September 2017 - December 2021

- Spearheaded the QAC department with **over 25 employees** for the largest education platform in Bangladesh.
- Successful supervision of creation and review of **19,018 video tutorials, 837 online-based smartbooks and 6,400 academic quizsets**.

## Skills

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### Software skills

- Statistical software: **R** (proficient), **STATA** (intermediate), **SPSS** (intermediate), **SAS** (beginner).
- Proficient in **RMarkdown/Quarto, LaTeX** and **Microsoft Office/Google Suite**.

### Technical skills

- Data analysis and visualization in using **tidyverse** family and **ggplot2** packages.

## Awards and Honors

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2022	<b>Pat Wahl Award</b> , Recognition of commitment to strategic use of online technologies to reach diverse communities for disseminating education.	Univ of Washington
2022	<b>Excellence Award</b> , Awarded by UW School of Public Health	Univ of Washington
2022	<b>Dean's Merit Award</b> , Faculty of Sciences awardee for obtaining the highest GPA (4.0) across all departments in B.S. Honors	University of Dhaka
2022	<b>Govt. Honours Scholarship</b> , Talent pool, ranked 1st in Faculty of Sciences	University of Dhaka
2021	<b>ISRT Golden Jubilee Gold Medal Award 2021</b> , for graduating top of the class with GPA (4.0)	University of Dhaka
2019	<b>ISRT Merit Stipend</b> , Institute of Statistical Research and Training	University of Dhaka

## Conferences & Presentations

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### ENAR 2024 Spring Meeting

Baltimore, MD, USA

#### Oral Presentation

March, 2024

- **Talk:** *Optimal Sandwich Variance Estimator in Penalized GEE for Nearly Separated Longitudinal Binary Data with Small Samples.*

### 2nd International Conference on Applied Statistics (ICAS) 2019

University of Dhaka, Bangladesh

#### Poster presentation

December, 2019

- **Poster:** *Intimate partner violence (IPV) with miscarriages, stillbirths and abortions: Identifying vulnerable households for women in Bangladesh.*

## Professional Services

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### Manuscript reviewer

- PLOS One; Midwifery; Child Abuse & Neglect.

## Professional Affiliations

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Member **Western North American Region (WNAR)**, International Biometric Society

2023 - Present

Member **Eastern North American Region (ENAR)**, International Biometric Society

2023 - Present

## University Services and Activities

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Member	<b>Biostatistics Equity, Diversity, and Inclusion (EDI) Committee</b> , Education and Teaching subcommittee, University of Washington	<i>Sep 2022 - Aug 2023</i>
Member	<b>Graduate Student Representative</b> , Department of Biostatistics, University of Washington	<i>Sept 2022 - Present</i>
Member	<b>Biostatistics Communications/Alumni Relations Committee</b> , University of Washington	<i>Sept 2022 - Present</i>