Md. Jubayer Hossain

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Research Experiences

Center for Health Innovation, Research, Action, and Learning - Bangladesh *Dhaka, Bangladesh*
Founder, Management Lead & Data Analyst *June 2020 - Present*

International Centre for Diarrhoeal Disease Research, Bangladesh *Dhaka, Bangladesh*
Research Intern, Health Systems and Population Studies Division *February 2022 - June 2022*

Bio-Bio-1:: Bioinformatics Research Discusion Group *Dhaka, Bangladesh*
Team Member, Bioinformatics Group *February 2016 - June 2019*

Research Interests

Applied Machine Learning in Public Health, GIS & Remote Sensing in Public Health, Quantitative Methods

Academic Credentials

Jagannath University *Dhaka, Bangladesh*
Master of Science in Microbiology *January 2019 - January 2020*

Jagannath University *Dhaka, Bangladesh*
Bachelor of Science in Microbiology *January 2016 - January 2019*

Publications

1. Towhid, S. T., **Hossain, M. J.**, Sammo, M. A. S., & Akter, S. (2022). Perception of Students on Antibiotic Resistance and Prevention: An Online, Community-Based Case Study from Dhaka, Bangladesh. European Journal of Biology and Biotechnology, 3(3), 14–19. `https://doi.org/10.24018/ejbio.2022.3.3.341`

2. **Hossain, Md. J.**, Towhid, S. T., Sultana, S., Mukta, S. A., Gulshan, R., & Miah, S. (2022). Knowledge and attitudes towards thalassemia among universitystudentsin bangladesh. medRxiv. `https://doi.org/10.1101/2022.09.19.22280125`

3. **Hossain, Md. J.**, Towhid, S. T., Akter, S., Shahjahan, M., Roy, T., Akter, B., & Nodee, T. A. (2022). Self-management of diabetic patients from the urban areas in Bangladesh. medRxiv. `https://doi.org/10.1101/2022.08.23.22279128`

Working Papers

1. **Hossain, Md. J.**, Md Wahidul Islam, Rukaiya Ummi Moon, Rubaiya Gulshan, Sumaiya Akter Mukta, Mousumi Karmakar, Sabia Sultana,Md. Sharif Miah, Md. Ariful Islam (2021). Quality of Life among Bangladeshi Patients with Thalassemia using the SF-36 Questionnaire.

2. **Hossain, Md. J.**, Abul Kalam Azad, Md. Wahidul Islam, Muhibullah Shahjahan (2022). Factors influencing knowledge of antibiotic usage among patients of school-going children.

3. **Hossain, Md. J.**, Abul Kalam Azad, Md. Atik Shahriar Sammo (2022). A KAP Study on the Impact of C-section on Infant Gut Microbiota among Public University Students in Bangladesh

4. **Hossain, Md. J.**, Towhid, S. T.,Abul Kalam Azad, Manisha Das, Wahidul Islam, Muhibullah Shahjahan (2022). The role of community participation and social engagement in the prevention and control of dengue fever in Dhaka City

Skills

- **Programming Languages:** Python, R, SQL, Julia, JavaScript

- **Python Packages:** NumPy, Pandas, Matplotlib, SciPy, Plotly, Scikit-learn, PyCaret

- **R Packages:** tidyverse, ggplot2, ggpubr, gtsummary, Bioconductor, flexdashboard
- **Big Data Frameworks:** Dask, PySpark
- **Analytics Softwares:** SPSS, PowerBI, Google Sheets
- **Survey Tools:** RedCap, KoboToolBox, Google Forms
- **Miscellaneous Skills:** LaTeX, UNIX, Version Control(Git), Web Scraping, APIs, Visualizations

Projects

Bioinformatics Approach for Profiling Antibiotic Resistance genes from Metagenomic DNA Sequence ⚙

- **Aims:** To Profiling and predicting of antimicrobial-resistance antibiotic resistance genes from metagenomic DNA sequences.
- **Technical Skills:** QIME2, DADA2, Bash

Heart Disease Analysis and Prediction Using Machine Learning ⚙

- **Aims:** With the dataset provided for heart analysis, we have to analyse the possibilities of heart attack on the basis of various features, and then the prediction from the analysis will tell us that whether an individual is prone to heart attack or not.
- **Technical Skills:** Pandas, NumPy, Matplotlib, Seaborn, Scikit-learn

Teaching

Jagannath University, Dhaka *Website*
Teaching Assistant, Department of Microbiology *October 2022 - Present*

Assisted Dr. Abul Kalam Azad, created course materials on undergrad level public health and hygiene.

Undergraduate Research Training Program (URTP) *Course Website*
Lead Organizer & Instructor *January 2022 - Present*

The Undergraduate Research Training Program (URTP) aims to develop better-prepared undergraduate researchers.

Health Research ToolBox: A Step by Step Guide for Beginners (Cohort 2) *Course Website*
Lead Organizer & Instructor *June 2021 - Present*

This course will give students a foundation in research principles and practice, mainly applied to public health.

Genomic Data Science with R: Making Sense of Genomic Data *Course Website*
Lead Organizer & Instructor *January 2022 - Present*

This course will give students a foundation in genomic research principles and practice, mainly applied to public health.

Python for Life Sciences - A Step by Step Guide for Life Scientists ⚙
Lead Organizer & Instructor *June 2022 - July 2022*

Python for life science research.

References

Syeda Tasneem Towhid, Ph.D. `towidst@mib.jnu.ac.bd`
Assistant Professor, Department of Microbiology, Jagannath University, Dhaka +8801746208281

Abul Kalam Azad, Ph.D. `akazad88@mib.jnu.ac.bd`
Associate Professor, Department of Microbiology, Jagannath University, Dhaka +8801732788272

Dr. Kamrun Nahar Koly `koly@icddrb.org`
Assistant Scientist, Health Systems and Population Studies Division, ICDDR,B +8801717190955