

PROGRAM INFORMATION	
Program: Biostatistics, PhD	Term: Fall 2024
Concentration:	Certificate: Public Health
Sub-matriculation School:	Enrollment Choice (FT/PT):
PERSONAL INFORMATION	
Name	
Mohammad Nayeem Hasan	
Preferred First Name: Mohammad Nayeem	Maiden or Other Name: Hasan
Birth Information – Date of Birth: 01-15-1994	
City, State/ Province, Country of Birth: Chattogram, Bangladesh	
Citizenship	
Citizenship Status: Non U.S. Citizen	Country of Citizenship: Bangladesh
Dual Country of Citizenship:	Immigration Sponsorship Required? Yes
Do you have U.S. work authorization documentation?	
Contact Information	
Email Address: nayeem5847@gmail.com	
Email Address Valid Until:	
Alternative Email Address: nayeem@ghcxb.org	
Notification Address	
1st floor, Rahib Mansion, Uttar Dikkul	
Cox's Bazar, 4700	
Bangladesh	Notification Address Valid Until:
Preferred US Phone Number:	Secondary US Phone Number:
Preferred Non-US Phone Number: +8801671912637	Secondary Non-US Phone Number:
Permanent Address	
	Permanent Address Valid Until:
Languages	
Native Language: Bengali	
Language 1 / Rating: English / Advanced	Language 2 / Rating:
Language 3 / Rating:	Language 4 / Rating:
Language 5 / Rating:	Language 6 / Rating:
Ancient Language 1 / Notes:	Ancient Language 2 / Notes:
Ancient Language 3 / Notes:	Ancient Language 4 / Notes:
Ancient Language 5 / Notes:	Ancient Language 6 / Notes:
Sex & Gender	
Sex: Male	Gender Identity: Male/Man
Pronouns: He, Him, His	
Military Service	
Are you the spouse or dependent of someone who is currently serving or who has served in the US Armed Services? No	
Are you currently serving, or have you served in the US Armed Forces? No	
Volunteer Corps	
Have you served in the Peace Corps?	Have you served in AmeriCorps?
Are you a City Year corps member or alumnus?	Are you currently, or will you be, a member of the Teach for America program?

Family Background

Do you come from a family with an annual income below established low income thresholds? **Yes**

Are you, or will you be the first person in your immediate family to have completed a bachelor's degree? **Yes**

Exploring Community at Penn

How will you explore community at Penn? Consider how Penn will help shape your perspective, and how your experiences and perspective will help shape Penn.

My desire to use statistical approaches to improve public health research and decision-making is what motivates me as a PhD candidate in Biostatistics at the University of Pennsylvania. By delving extensively into advanced training, I hope to have a thorough understanding of statistical modeling, analysis, and interpretation so that I can better equip myself to handle challenging health issues.

I am excited to work on cutting-edge research projects with distinguished faculty members in the Biostatistics department. By working together, I hope to provide fresh perspectives to the profession to handle health data and guide evidence-based treatment decisions. I get the chance to attend conferences, share my research findings, and interact with the larger scientific community because of Penn's strong academic environment.

As a PhD candidate, I'm dedicated to building a departmental sense of community by working with other students to share knowledge and ideas. This collaborative spirit adds to Penn's vibrant and encouraging research culture in addition to improving the educational experience.

Apart from furthering my individual academic and scientific objectives, my goal is to make a significant contribution to the department's research efforts and the larger field of public health research through my collaborations and contributions.

ACADEMIC BACKGROUND - COLLEGE

College / University Information

Another name used on prior academic records?

Mohammad Nayeem Hasan

Post-Secondary / College/University #1: SHAHJALAL UNIV OF SCIENCE & TECH

City: SYLHET	State/Province:	Country: Bangladesh
Begin Date: 01-2017	End Date: 06-2018	
Degree Level: Master's	Type of Degree or Diploma: M.S.	Major Field(s) of Study: Statistics
GPA Scale: 4.0	Other GPA Scale:	GPA: 3.50
Is this your primary undergraduate institution?	Will you receive this degree prior to enrolling at Penn? No	(For institutions in countries where English is not an official language) Was English the primary language of instructions for all non-language programs at this institution? Yes

Post-Secondary / College/University #2: SHAHJALAL UNIV OF SCIENCE & TECH

City: SYLHET	State/Province:	Country: Bangladesh
Begin Date: 01-2014	End Date: 12-2017	
Degree Level: Bachelor's	Type of Degree or Diploma: Second Major in Computer Science	Major Field(s) of Study: Computer Science and Engineering
GPA Scale: 4.0	Other GPA Scale:	GPA: 3.25
Is this your primary undergraduate institution? No	Will you receive this degree prior to enrolling at Penn? No	(For institutions in countries where English is not an official language) Was English the primary language of instructions for all non-language programs at this institution? Yes

Post-Secondary / College/University #3: SHAHJALAL UNIV OF SCIENCE & TECH

City: SYLHET	State/Province:	Country: Bangladesh
Begin Date: 01-2013	End Date: 12-2016	
Degree Level: Bachelor's	Type of Degree or Diploma: B.Sc.	Major Field(s) of Study: Statistics
GPA Scale: 4.0	Other GPA Scale:	GPA: 3.40
Is this your primary undergraduate institution? Yes	Will you receive this degree prior to enrolling at Penn? No	(For institutions in countries where English is not an official language) Was English the primary language of instructions for all non-language programs at this institution? Yes

Post-Secondary / College/University #4:

City:	State/Province:	Country:
Begin Date:	End Date:	
Degree Level:	Type of Degree or Diploma:	Major Field(s) of Study:
GPA Scale:	Other GPA Scale:	GPA:
Is this your primary undergraduate institution?	Will you receive this degree prior to enrolling at Penn?	(For institutions in countries where English is not an official language) Was English the primary language of instructions for all non-language programs at this institution?

STANDARDIZED TESTS – ENGLISH LANGUAGE PROFICIENCY

TOEFL

TOEFL 1 – Have you taken the TOEFL? No	Have you requested that your official scores be sent to Penn?
Date of Test:	Reading Score:
Speaking Score:	Listening Score:
Writing Score:	Total Score:
TOEFL 2	Have you requested that your official scores be sent to Penn?
Date of Test:	Reading Score:
Speaking Score:	Listening Score:
Writing Score:	Total Score:

IELTS

IELTS 1 – Have you taken the IELTS? Yes	Have you requested that your official scores be sent to Penn? Yes
Date of Test: 11-2023	Reading Score: 7
Speaking Score: 6.5	Listening Score: 6.5
Writing Score: 5.5	Total Score: 6.5
IELTS 2 – Have you taken the IELTS?	Have you requested that your official scores be sent to Penn?
Date of Test:	Reading Score:
Speaking Score:	Listening Score:
Writing Score:	Total Score:

PTE

	Date of Test:
Overall Score:	
Listening Score:	Reading Score:
Speaking Score:	Writing Score:
Grammar Score:	Oral Fluency Score:
Pronunciation Score:	Spelling Score:
Vocabulary Score:	Written Disclosure Score:

Duolingo - Have you taken the Duolingo English test?

Duolingo 1	Have you requested official scores be sent to Penn?
Date of Test:	Literacy Score:
Comprehension Score:	Conversation Score:
Production Score:	Total Score:
Duolingo 2	
Date of Test:	Literacy Score:
Comprehension Score:	Conversation Score:
Production Score:	Total Score:

RECOMMENDATIONS

Recommender 1

First Name/Given Name, Last Name/Family Name/Recommender Type

Md Jamal Uddin

Email Address:

jamal-sta@sust.edu

Do you waive the right to view the recommendation? Yes

Online submission? Yes

Recommender 2

First Name/Given Name, Last Name/Family Name/ Recommender Type

Najmul Haider

Email Address:

n.haider@keele.ac.uk

Do you waive the right to view the recommendation? Yes

Online submission? Yes

Recommender 3

First Name/Given Name, Last Name/Family Name/ Recommender Type

Sumon Ghosh

Email Address:

sghosh14@vols.utk.edu

Do you waive the right to view the recommendation? Yes

Online submission? Yes

Recommender 4

First Name/Given Name, Last Name/Family Name/ Recommender Type

Email Address:

Do you waive the right to view the recommendation?

Online submission?

Recommender 5

First Name/Given Name, Last Name/Family Name/ Recommender Type

Email Address:

Do you waive the right to view the recommendation?

Online submission?

SUPPORTING DOCUMENTS

VARIES BY PROGRAM

Personal Statement:	BGS_Hasan_Mohammad_Nayeem_95085530_PERSONALSTATEMENT.pdf
Writing Sample:	
Writing Sample:	
Writing Sample:	
Writing Sample:	
Curriculum Vitae:	
Resume:	Hasan_Mohammad_Nayeem_90888626_UPENNG-RESUME_ATTACH_95085530.pdf
Essay 1:	
Essay 2:	
Essay 3:	
Essay 4:	
Essay 5:	
Digital Portfolio 1:	
Digital Portfolio 2:	
Research Statement:	BGS_Hasan_Mohammad_Nayeem_95085530_RESEARCHSTATEMENT.pdf
Professional Schools Application:	
Other Support (Applicant)	
Mentor Biosketch and Other Support (Combined Document):	
Curriculum Planning Guide:	
AID-GC Scholarship Essay:	
BAAS Scholarship Essay:	
Academic Integrity Violation Statement	
Self-Reported English Proficiency Test Score	

PERELMAN SCHOOL OF MEDICINE / BIOMEDICAL GRADUATE STUDIES – SUPPLEMENTAL QUESTIONS

Describe your major scientific interests. Include areas of research you would like to investigate and any particular Penn researchers whose work interests you.

As a seasoned humanitarian professional with over three years of expertise in health-related data management gathered from reputable national and international organizations such as Green Hill-Community Partners International, Food for the Hungry-UNHCR, and Partners in Health & Development-Save the Children. I acknowledge the paramount importance of advancing my academic pursuits. Doing so would help bridge the gap between my extensive professional background and research involvement, creating a comprehensive knowledge base essential for addressing evolving health challenges.

Pursuing a doctoral program in Biostatistics at the University of Pennsylvania aligns seamlessly with my educational and professional aspirations, both in the short and long term. In the immediate future, my goal is to refine my Biostatistics skills to conduct original, impactful research. Looking ahead, my long-term vision involves leading a research laboratory dedicated to

If you are currently a student, please enter courses which will NOT appear in your transcripts.

If you have any publications (published or submitted), please provide them:

1. a] Haider N, Hasan MN, Khalil I, Tonge D, Hegde S, Chowdhury MAB, et al. The 2022 dengue outbreak in Bangladesh: hypotheses for the late resurgence of cases and fatalities. J Med Entomol. 2023
- b] Hasan MN, Babu MR, Chowdhury MAB, Rahman MM, Hasan N, Kabir R, et al. Early childhood developmental status and its associated factors in Bangladesh: a comparison of two consecutive nationally representative surveys. BMC Public Health. 2023
- c] Haider N, Hasan MN, Guitian J, Khan RA, McCoy D, Ntoumi F, et al. The disproportionate case-fatality ratio of COVID-19 between countries with the highest vaccination rates and the rest of the world. IJID Regions. 2023
- d] Hasan MN, Tambuly S, Trisha KF, Haque MA, Chowdhury MAB, Uddin MJ. Knowledge of HIV/AIDS among married women in Bangladesh: analysis of three consecutive multiple indicator cluster surveys [MICS]. AIDS Res Ther. 2022
- e] Hasan MN, Haider N, Stigler FL, Khan RA, McCoy D, Zumla A, et al. The Global Case-Fatality Rate of COVID-19 Has Been Declining Since May 2020. Am J Trop Med Hyg. 2021
- f] Hasan MN, Abdul Baker Chowdhury M, Jahan J, Jahan S, Ahmed NU, Uddin MJ. Cesarean delivery and early childhood diseases in Bangladesh: An analysis of Demographic and Health Survey [BDHS] and Multiple Indicator Cluster Survey [MICS]. PLoS One. 2020
- g] Hasan MN, Rahman K, Tajmunnaheer, Bhuia MR. Assessment of ground water quality in the vicinity of Sylhet City, Bangladesh: a

Please list any awards or other professional accomplishments not already noted above.

Research Experience

1. Quantitative Measure of Healthy Aging in Sylhet City: A Frailty Index Approach, Sponsored by University Research Centre, Role: Research Assistant
2. Ground Water in the Vicinity of Sylhet City, Bangladesh: Assessment of Quality and Association Based on Multivariate Statistical Techniques, Sponsored by University Research Centre, Role: Research Assistant
3. Extent of Lifestyle and Heritability Effects on Cancer: Bangladesh Perspective, Sponsored by the University Research Centre, Role: Research Assistant

Editorial Board Member

1. PLOS ONE
2. Frontiers in Water

We strive to recruit a student population with a wide variety of experiences, including students who come from disadvantaged backgrounds. According to the NIH definition, individuals who meet two or more of the following criteria are considered disadvantaged. Do you meet two or more of the criteria?

No

>> Briefly describe your major scientific interests. Indicate areas of research you would like to investigate and any particular Penn researchers whose work interests you. (Cont.)

advancing statistical design and methodology, mentoring future generations of scientists, and fostering a team committed to applied and collaborative work. My determination to excel in Biostatistics is fueled by academic influences and esteemed professionals who have generously guided me and inspired my dedication to continuous learning. My passion for health science ignited during my undergraduate studies, marking the beginning of my research journey. I initiated this journey by investigating the correlation between delivery [C-section Vs normal] methods for newborn and their susceptibility to diseases [diarrhea, fever, ARI, etc.] in Bangladesh. This project marked my initial application of the statistical knowledge acquired during my undergraduate education. Furthermore, my Second Major in Computer Science and Engineering greatly enhanced my proficiency in utilizing various statistical programming languages such as SAS, Stata, and R. This background made data analysis a seamless and efficient process for me. In my role within public health, engaging with various disease studies has nurtured a compassionate disposition toward humanity. Consequently, my primary research interests orbit around infectious diseases, non-communicable diseases, and maternal and child health.

I have effectively applied my academic aspirations to professional achievements following the completion of my Bachelor of Science in Statistics from Shahjalal University of Science and Technology, Sylhet. My educational journey enriched my practical knowledge through engagement in research endeavors, commencing with foundational courses such as Principles of Statistics, Theory of Statistics, Sampling Techniques, Design and Analysis of Experiments, and Statistical Inference course during my undergraduate years. However, it was during the advanced stages of my education, specifically in the third year, that I was formally introduced to Regression Analysis and Statistical Computing. This marked the point where I could apply the theoretical foundation acquired in the initial two years of study to practical applications. In these courses, I came to realize the power of statistical data analysis in identifying trends, patterns, and valuable insights. As I progressed into my fourth year and pursued my MS program, I delved deeper into the application of statistical tools, particularly within the realms of Biostatistics and Epidemiology. During my MS program, I initiated work on various projects under the SUST Research Center and Department of Statistics. While these studies initially aimed to tackle specific community issues, my aspirations evolved to encompass a broader spectrum of health concerns, particularly focusing on Public Health. This shift in focus is driven by my desire to contribute to the prevention and resolution of emerging health issues.

In my current role as a Monitoring and Evaluation Officer [Health] within Humanitarian Response, I have been fortunate to engage in various projects aimed at achieving the best health outcomes for affected populations. As a humanitarian worker, I actively contributed to the Rohingya Refugee/Forcibly Displaced Myanmar Nationals [FDMN] Response Program by assisting in research recruitment and collaborating on data analysis. The project I am currently involved in is titled "Enhancing Community Health, Water Sanitation & Hygiene, Health Systems Support & Health Post for FDMN and Host Community Population". However, the journey through this program was not always without challenges, and I played a pivotal role in propelling it forward through the implementation of strategies like advocacy, communication, and social mobilization, providing crucial technical support to the program team, enhancing service quality through capacity building, and effectively managing data collection and generating insightful reports. My experience in Humanitarian Response has instilled in me the confidence and belief that I possess the ability to devise solutions independently.

While my professional experience has primarily focused on the Rohingya Response, I recognize the potential for furthering my knowledge to enhance personal satisfaction and professional growth. Throughout this period, I actively engaged in voluntary work and authored over 30 publications in reputable journals related to public health. My research during the COVID-19 pandemic resulted in the publication of impactful journals. In addition to the above, I have been deeply involved in addressing the ongoing Dengue outbreak in Bangladesh [2022-2023], resulting in ongoing work also published in several impactful journals. Furthermore, I have also contributed to research covering a range of topics, including non-communicable diseases, childhood diseases, early childhood development, maternal health, indoor environment, groundwater quality, and meteorological factors.

Pursuing the Ph.D. program at the University of Pennsylvania represents a significant stride toward my goal of becoming an independent scientist in my home country, focusing on public health applications through Biostatistics. I am eagerly anticipating the opportunity to collaborate with Dr. Jarcy Zee and Dr. Rui Xiao, whose research aligns closely with my interests. Their unique approach, to integrating public health, promises a comprehensive understanding of multifaceted associations. Interacting with esteemed faculty members such as Professor Dr. Rebecca A Hubbard and Dr. John H. Holmes is another exciting aspect of this journey, particularly in delving into Biostatistics and Epidemiology, given my foundation in those field experience gained from my BSc, MS, and prior research work. With their guidance, I believe I will obtain the robust knowledge base necessary to achieve my research leadership aspirations. Combined with my sharpened critical thinking skills stemming from my expertise and experience, I am fully prepared to embrace the academic challenges and opportunities presented by the University of Pennsylvania.

Thank you for considering my application.

>> If you have any publications (published or submitted), please provide them. (Cont.)

multivariate analysis. Sustain Water Resour Manag. 2020

h] Hasan MN. A Comparison of Logistic Regression and Linear Discriminant Analysis in Predicting of Female Students Attrition from School in Bangladesh. 2019 4th International Conference on Electrical Information and Communication Technology, EICT 2019. 2019

2. a] Haider N, Asaduzzaman M, Hassan MN, Rahman M, Sharif AR, Ashrafi SAA, et al. Bangladesh's 2023 Dengue outbreak - age/gender-related disparity in morbidity and mortality and geographic variability of epidemic burdens. International Journal of Infectious Diseases. 2023

b] Rahman MM, Marzo RR, Chowdhury S, Qalati SA, Hasan MN, Paul GK, et al. Knowledge, Attitude and Practices Toward Coronavirus Disease [COVID- 19] in Southeast and South Asia: A Mixed Study Design Approach. Front Public Health. 2022

c] Haider N, Yavlinsky A, Chang YM, Hasan MN, Benfield C, Osman AY, et al. The Global Health Security index and Joint External Evaluation score for health preparedness are not correlated with countries' COVID-19 detection response time and mortality outcome. Epidemiol Infect. 2020

d] Ferdushi KF, Kamil AA, Hasan MN, Islam T. Factors Associated with Coronary Heart Disease among Elderly People in Different Communities. Statistics for Data Science and Policy Analysis. 2020

>> Please list any awards or other professional accomplishments not already noted above. (Cont.)

Reviewer activities

1. Frontiers in Public Health
2. Scientific Reports
3. BMC Public Health
4. PLOS ONE
5. Journal of Health, Population and Nutrition
6. BMC Research Notes
7. BMC Pediatrics
8. Qeios
9. Research in Health Services & Regions
10. Dialogues in Health
11. BMC Cancer

Conferences

1. Oral presentation on "Global case-fatality rate of COVID-19 is declining since May 2020" at the "World One Health Congress 2020" Conference.
2. Oral presentation on "A Comparison of Logistic Regression and Linear Discriminant Analysis in Predicting of Female Students Attrition from School in Bangladesh" at the "Electrical Information & Communication Technology 2019" Conference".
3. Oral presentation on "Association between exclusive breastfeeding and common childhood diseases in Bangladesh" in the "Data Science and SDGs: Challenges, Opportunities, & Realities 2019" Conference.

Mentorship experience

1. "Workshop on Data Analysis Using SPSS" organized by OGIVE Analytics
2. "Statistics and Data Analysis for Research" which is under the "Autumn 2020 Research Internship Program" organized by Chittagong University Research and Higher Study Society
3. "Workshop on Data Analysis Using SPSS" organized by SUST Science Arena

Training participations

1. "R for Bioinformatics" by CHIRAL
2. "Astronomical Data Analysis: Introduction & How it Works" by CAM_SUST
3. "Professional Report Writing Skills" by BDJOBS
4. "Research Techniques on Social Sciences" by SUST Research Center

ADDITIONAL INFORMATION

Penn Background

Have you ever applied for admission at Penn before?

<u>Previous Application #1</u>	Year:	School:
<u>Previous Application #2</u>	Year:	School:
<u>Previous Application #3</u>	Year:	School:
<u>Previous Application #4</u>	Year:	School:
<u>Previous Application #5</u>	Year:	School:

Are you a current student at Penn? **No** Penn ID:

Are you currently employed at Penn? **No** Where Employed:

Are you a Penn Alum? **No** School and last year attended:

University Relations

Do you have a parent (biological or adoptive) who is a full-time member of the faculty or staff at the University of Pennsylvania? Do you have a parent, grandparent or sibling who has attended the University of Pennsylvania?

Parent/Grandparent/Sibling #1:

Name	Relationship
Graduating Class or Year	Degree School / Major

Parent/Grandparent/Sibling #2:

Name	Relationship
Graduating Class or Year	Degree School / Major

How did you hear about us?
 Web Search, PhD program in USA

To what other graduate programs do you intend to apply?

Graduate Program 1: School /Institution

Program	Degree
---------	--------

Graduate Program 2: School /Institution

Program	Degree
---------	--------

Graduate Program 3: School /Institution

Program	Degree
---------	--------

Research Information

Title of your proposed research project

Mentor Information

Primary Mentor	Secondary Mentor
Department Chair / Division Chief	Other

Information Sharing

Other people with whom you permit us to share information about your application status? *Name, Relationship, Email Address, Phone Number*

EMPLOYMENT HISTORY

Years of work experience, including summer jobs or positions held during your undergraduate or graduate studies if relevant:

Employer #1: *Name* Green Hill, Cox's Bazar

Start Date: 02-2023

End Date:

Number and Street Name White House, Kolatoli Road

Address Line 2

City, State/ Province, Country Cox's Bazar, Cox's Bazar, 4700, Bangladesh

Position Title/Department/Industry:

Monitoring and Evaluation Officer

Reason for Leaving:

Employer #2: *Name* Food for the Hungry, Cox's Bazar

Start Date: 03-2022

End Date: 02-2023

Number and Street Name White House, Kolatoli Road

Address Line 2

City, State/ Province, Country Cox's Bazar, Cox's Bazar, 4700, Bangladesh

Position Title/Department/Industry:

Health Information System Officer

Reason for Leaving:

I left my previous role to pursue a more challenging and rewarding opportunity that aligns with my career goals and offers greater potential for professional growth

Employer #3: *Name* Partners in Health & Development, Cox's Bazar

Start Date: 02-2021

End Date: 02-2022

Number and Street Name S. K. Tower, Khurushkul Road

Address Line 2

City, State/ Province, Country Cox's Bazar, Cox's Bazar, 4700, Bangladesh

Position Title/Department/Industry:

Management Information System Officer

Reason for Leaving:

I left my previous role to pursue a more challenging and rewarding opportunity that aligns with my career goals and offers greater potential for professional growth

Employer #4: *Name* Save the Children, Bangladesh

Start Date: 07-2019

End Date: 12-2019

Number and Street Name Block-E, Upashohor

Address Line 2

City, State/ Province, Country Sylhet, Sylhet, 4700, Bangladesh

Position Title/Department/Industry:

Project Supervisor and Data Analyst

Reason for Leaving:

I left my previous role to pursue a more challenging and rewarding opportunity that aligns with my career goals and offers greater potential for professional growth