CURRICULUM VITAE
MD ROUNGU AHMMAD, PHD

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HIGHLIGHTS

- ☑ **EDUCATION**: PhD & MS in Biostatistics & Data Science, MSc & BSc in Statistics.
- ☑ **EXPERIENCES**: Working with reputable government/ private research institutions and universities across the country and abroad.
- ☑ **AWARDS**: Received several external and internal grant awards and honors.
- ☑ **MEMBERSHIP**: Several professional memberships and scholar journal member.
- ☑ **EXPERTISE**: Computation using R, SAS, Stata, Python, SPSS, Statistical models (Frequentist and Bayesian approaches), Missing data, Non-inferiority margins, joint models, composite endpoints, Machine learning, Deep Learning.
- ☑ **PUBLICATIONS**: Strong record of publication in reputable peer-reviewed journals.
- ☑ **REWARDING**: Presenting research work at national and international conferences and receiving reward's for outstanding contributions.
- ☑ **RESEARCH GOALS**: Strongly passionate about clinical trials, public health research, biostatistics, and machine learning models development and application.

EDUCATION

University of Mississippi — Jackson, MS, USA
PhD in Biostatistics and Data Science, School of Population Health — Dec/2022
Dissertation: Joint Modeling Multivariate Longitudinal and Multiple Time to Event Outcomes

University of Washington — Seattle, WA
Professional Certificate in Statistical Genetics — Aug/2022
Coursework: Introduction to Genetics and Genomics, Gene Expression Profiling, Mixed Models in Quantitative Genetics, and Applications

University of Mississippi — Jackson, MS, USA
MS in Biostatistics and Data Science, School of Population Health — May/2020
Projects: Generalized Linear Mixed Modeling for Count and Zero-inflated Count Outcomes

University of Dhaka — Dhaka, BD
MSc in Statistics Biostatistics and Informatics — Jul/2009
Projects: Impact of Quality of Life of urban disabled people in Bangladesh

University of Dhaka — Dhaka, BD
BSc in Statistics, Biostatistics and Informatics — Jul/2007
Projects: The Problems of the Effective Classroom Teaching in Govt Colleges in Dhaka City

ACADEMIC APPOINTMENTS

Assistant Professor of Biostatistics and Data Science — May/2025 – Present
University of South Florida, USF Health, College of Nursing — *Tampa, FL*
Supervisor: Name and email address will be provided upon request — 40hr/Week

Assistant Professor of Biostatistics and Epidemiology — Aug/2024 – May/2025
University of Southern Mississippi, Dept of Biostatistics & Epidemiology — *Hattiesburg, MS*
Supervisor: Name and email address will be provided upon request — 40hr/Week

Assistant Professor of Statistics	Feb/2011 – Aug/2018
Jagannath University Dhaka-1100, Department of Statistics	*Dhaka, Bangladesh*
Chairman: Name and email address will be provided upon request	40hr/Week
Adjunct Assistant Professor of Statistics and Mathematics	Jan/2016 – Aug/2018
Mawlana Bhashani Science and Technology University	*Tangail, Bangladesh*
Chairman: Name and email address will be provided upon request	20hr/Week
Senior Lecturer in Applied Statistics	Dec/2010 – Feb/2011
University of Information Technology and Science	*Dhaka, Bangladesh*
Coordinator: Name and email address will be provided upon request	20hr/Week
Lecturer in Statistics	Jan/2010 – Feb/2011
World University of Bangladesh	*Dhaka, Bangladesh*
Chairman: Name and email address will be provided upon request	40hr/Week

OFFICIAL APPOINTMENTS

Mathematical Statistician	Jan/2023 – Aug/2024
US Food and Drug Administration (FDA), Office of Biostatistics	*Silver Spring, MD*
Supervisor: Name and email address will be provided upon request	40hr/Week
Data Scientist IV	Oct/2022 – Jan/2023
University of Pittsburgh-School of Public Health-Biostatistics	*Pittsburgh, PA*
Supervisor: Name and email address will be provided upon request	40hr/Week
Research Assistant	Jan/2020 – Nov/2022
Jackson Heart Study	*Jackson, MS*
Supervisor: Name and email address will be provided upon request	20hr/Week
Graduate Research Assistant	Aug/2018 – Nov/2022
John D Bower School of Population Health	*Jackson, MS*
Supervisor: Name and email address will be provided upon request	20hr/Week
Planning Manager	Sep/2010 – Jan/2011
Viyellatex Group Limited	*Dhaka, Bangladesh*
Director: Name and email address will be provided upon request	40hr/Week

HONORS AND AWARDS

- **Travel Grant, 2022**, SOPH and Data Science Department, University of Mississippi Medical Center for attending APHA Conference, Boston.
- **Travel Grant, 2022**, Data Science Department, University of Mississippi Medical Center for attending JSM Conference, Washington, D.C.
- **SISG Scholarship**, Institute in Statistical Genetics, Public Health, University of Washington
- **Fulbright scholarship**, University of Mississippi Medical Center, Jackson, Mississippi
- **Dean Award**, John D Bower School of Population Health, Department of Data Science, University of Mississippi Medical Center
- **Book Prize, Merit Scholarship**, from Department of Statistics, University of Dhaka

SOCIETY MEMBERSHIP

- **American Statistical Association (ASA)**: Life Member
- **American Public Health Association (APHA)**: Member
- **University of Mississippi Medical Center Alumni Association** : Life Member
- **UMMC department of Data Science Alumni Association** : Life Member
- **Bangladesh Statistical Association** : Life Member

- **International Bangladeshi Statistical Association** : Life Member
- **Dhaka University Statistics Department Alumni Association** : Life Member
- **Data Science Bangladesh** : Life Member
- **Jagannath University Statistics Department Alumni Association** : Life Member
- **Dhaka University Alumni Forum Inc, DC MD VA area** : Life Member

EDITORIAL REVIEW ACTIVITIES

Editorial Board Membership

2025–Present	Journal of Behavioral Sleep Medicine

Reviewer

2025–Present	Journal of Autism and Developmental Disorders (JADD)
2025–Present	Journal of Alzheimer's Disease
2025–Present	POLS One-Research Journals
2025–Present	Autism
2025–Present	JAACAP Open

RESEARCH GRANTS AND CONTRACTS

Prending Grant

Project Title:	Intersectional and Spatiotemporal Patterns of Co-Occurring Substance Use and Mental Health Disorders Among Unemployed or Not in the Labor Force U.S. Veterans (COD-VA)
Role:	**Principal Investigator**
Funding Source:	NEW RESEARCHER GRANT (NRG), USF
Project Period:	March 1, 2026 – Feb 27, 2027
Total Award:	$20,000

Funded Grant

Project Title:	Age-Specific Sleep Sufficiency and Risk of Autism Spectrum Disorder: An Analysis of Developmental Sleep Patterns in U.S. Children
Role:	**Principal Investigator**
Funding Source:	SHINE Science Center
Project Period:	October 1, 2025 – September 30, 2026
Total Award:	$7,500

Project Title:	AI-Driven Insights into Sex Differences in Sleep, Neuroinflammation, Neurocognition, and Neurodegeneration: An ADNI Cohort Analysis
Role:	**Co - Investigator**
Funding Source:	Pilot to Advance Interdisciplinary Research
Project Period:	03/01/2026-02/28/2027
Total Award:	$25,000

Project Title:	AI/ML Approaches to Address Utilization Gaps and Develop Outcome Predictive Biomarkers/Models in Cancer Immunotherapy
Role:	**Co-Investigator**
Funding Source:	Pilot to Advance Interdisciplinary Research
Project Period:	03/01/2026-02/28/2027
Total Award:	$12,500

Not Funded Grant

Project Title:	Data Science/ AI-Powered Mental Health Surveillance from Weather-Related Social Media Data (Twitter/X) in Florida
Role:	**Principal Investigator**
Funding Source:	USF College of Nursing
Project Period:	March 1, 2026 – Feb 27, 2027
Total Award:	$25,000

Project Title:	Several collaborative grant supports
Role:	**Co-I/Co-PI**
Funding Source:	National Institutes of Health (NIH)/ Other Sources
Project Period:	
Total Award:	varies

Under Preparation Grant Proposal

Project Title:	Currently Developing Several Grant Proposals
Role:	**Co-I/Co-PI**
Funding Source:	NIH, DOE, NSF, Autism Research Foundation, ACS, and so on
Project Period:	
Total Award:	Varies

MAJOR RESEARCH INTERESTS

- I am interested in developing advanced statistical methodologies, including joint modeling frameworks, survival analysis techniques, and other approaches for complex longitudinal and time-to-event data, to address challenging problems in health and biomedical research. My work focuses on creating data-driven solutions that enhance inference, prediction, and decision-making in clinical trials and population health studies.

- My research focuses on oncology, with an emphasis on improving survival prediction and biomarker discovery through the integration of advanced biostatistical methods, survival analysis, machine learning, and large-scale bioinformatics resources. Building on my dissertation and ongoing multidisciplinary collaborations, I am passionate about developing novel statistical and machine learning approaches to enhance cancer risk stratification, treatment evaluation, and precision oncology.

- Autism Spectrum Disorder (ASD) is increasingly associated with a higher risk of chronic health conditions driven by complex interactions among ASD and chronic conditions. Through multidisciplinary collaborations, I am interested in advancing epidemiologic methods, biostatistical modeling, and machine learning to develop predictive tools and early intervention strategies that identify at-risk children and reduce long-term health burdens.

- Infectious diseases continue to pose major global health and economic challenges, amplified by antimicrobial resistance and emerging pathogens such as Severe acute respiratory syndrome coronavirus 2, highlighting the need for stronger surveillance, predictive analytics, and targeted prevention strategies. My research integrates biostatistics, bioinformatics, and machine learning to elucidate pathogen transmission dynamics, identify biomarkers and risk predictors, and develop data-driven models that inform public health policy, pandemic preparedness, and evidence-based interventions.

- Cardiovascular disease (CVD) remains the leading cause of death in the United States, contributing to nearly one in five deaths and driven by modifiable risk factors. My research develops advanced statistical and machine learning methods using large-scale population and clinical data to improve CVD risk prediction, identify high-risk individuals, and inform targeted prevention and intervention

strategies, building on my dissertation and ongoing collaborative work aimed at reducing CVD-related mortality.

- Chronic disease burden is strongly shaped by rural–urban disparities that affect rural communities, particularly across the Southern United States. My research integrates advanced analytics, biostatistics, and machine learning with large-scale population data to identify key risk factors, develop personalized intervention strategies, and generate actionable insights that improve prediction, expand healthcare access, and promote equitable chronic disease prevention and public health outcomes.

PROFESSIONAL PUBLICATIONS (FROM 2013)

Statistical Methods and Computations

7. Md Roungu Ahmmad, Fazlay Faruque, (**2026**), Integrating machine learning and spatial analytics to identify rural–urban inequities in obesity-related chronic disease burden in the U.S. Deep South, Nature Digital Public Health (In Peer Reviewing)

6. Md Roungu Ahmmad, Fazlay Faruque, Xiaoli Zhang (**2026**), The Obesity-Related Chronic Disease Index (ORCDi): Development, Validation, and Spatial Patterns of Chronic Disease Burden Across U.S. Census, The Lancet Regional Health - Americas (In Peer Reviewing)

5. Md Roungu Ahmmad, Morshed Alam, Wondwosen Yimer (**2023**), Joint Modeling for Zero-Inflated Over-Dispersed Heart failure Counts and Longitudinal Lipid profiles; an Application of the Jackson Heart Study, Presented in JSM conference: Statistical learning and computing with novel applications, Contributed Papers, Metro Toronto Convention Centre, 2639

4. Ahmmad, M. R. (**2022**), Modeling Multivariate Longitudinal and Multiple Time to Event Outcomes (Doctoral dissertation, University of Mississippi Medical Center, John D. Bower School of Population Health)

3. Hossain, M. S., M. Ataharul Islam, Deluar J. Moloy and M., Roungu Ahmmad (**2014**), Local Likelihood Estimation for the Proportional Hazards Model and Comparison with Global Likelihood, Journal of Science and Technology, Vol. 3(2): 391-398

2. Roungu Ahmmad, Md Sanwar Hossain, Md Matair Rahman, Azizur Rahman (**2014**), Markovian Migrational Models a Dynamics of Repeat Migration: A Markov Chain Analysis and Application, International Journal of Science and Technology, Volume 2, No. 4, pp 285-290

1. M Roungu Ahmmad, Md. Matair Rahman , Md. Sanwar Hossain, Azizur Rahman (**2013**), The Canonical Correlation Analysis - An Application to Bank Performance and Consumers Satisfaction, International Journal of Advanced Scientific and Technical Research, Issue 3, volume 1, PP 685–694.

Applications in Public Health Outcomes

16. Md Roungu Ahmmad, Ukamaka Oruche, Sahil Kothiya (**2026**), Substance Use and Co-occurring Mental Health Disorders in the Deep South United States: A Comprehensive Analysis of Mental Health Client Level Data, The American Journal of Drug and Alcohol Abuse (Revison Done, publication in progress)

15. Ahmmad, M.R., Khan, M.T.F., Hossain, E. et al. (**2026**) Competing mortality risk from COVID-19, cerebrovascular diseases, and ischemic heart disease among U.S. cancer patients by race, income, and rurality. Discov Public Health 23, 147. https://doi.org/10.1186/s12982-026-01492-2

14. Ahmmad, M. R., Pantazopoulos, H., & Kothiya, S. H. (**2026**). A comprehensive causal and machine learning framework for autism spectrum disorder risk prediction and high-risk subgroup identification from children with chronic health and genetic disorders in the United States. Research in Autism, 131, 202826.

13. Khan, M. T. F., Mazumder, S., Ahmmad, M. R., Rjbongshi, A., Parvez, I., & Manik, M. M. R. (**2026**). National and regional trends of mental health disorders among older adults treated in the US state mental health system. Journal of Affective Disorders, 121205.

12. Ahmmad, M. R., Khan, M. T. F., Kothiya, S. H., Rashid, M., & McCrae, C. (**2026**). Sleep pattern consistency and autism spectrum disorder in US children: Associations and identification of high-risk subgroups. Research in Developmental Disabilities, 168, 105201.

11. Rjbongshi, A., Ahmmad, M. R., Mazumder, S., & Khan, M. T. F. (**2026**). National and Regional Trends in Mental Health Disorders Among US Adults Treated in the State Mental Health System. International Journal of Mental Health and Addiction, 1-17.

10. Ahmmad, M. R., Pantazopoulos, H., Faruque, F., Zhang, X., & Puri, R. (**2025**). Association Between Age-Specific Sleep Sufficiency and Autism Spectrum Disorder in US Children. Journal of Autism and Developmental Disorders, 1-14.

9. Ahmmad, M. R., Hossain, E., Khan, M. T. F., & Paudel, S. (**2025**). Using machine learning to identify risk factors for Alzheimer's disease among older adults in the United States: The role of chronic and behavioral health. Journal of Alzheimer's Disease Reports, 9, 25424823251377691.

8. Ahmmad R (**2023**) Nomogram Based Survival Predictions of Patients with Soft Tissue Cancer Including Heart in the United States. J Clin Exp Pathol 13: 446.

7. Roungu Ahmmad, Fazlay Faruque (**2023**), Distribution of Obesity-related Health Outcomes across the Urban-Rural Commuting Area in Mississippi, Alabama, Louisiana, and Georgia, Diabetes Case Reports. 8:148, Apr. 03, DOI: 10.35841/2572-5629.23.8.148

6. Roungu Ahmmad, Paul A Burns, Ashraful Alam, Jeannette Simino, Wondwosen Yimer, and Fazlay Faruque (**2023**), Understanding the Impact of Social Engagement Activities, Health Protocol Maintenance, and Social Interaction on Depression during COVID-19 Pandemic among Older Americans, Journal of Neurological Disorders, Volume 11:2

5. Roungu Ahmmad, M Nurul Islam, Arif Sattar (**2014**), Impact of Disability on Quality of Life of Urban Disabled People in Bangladesh, International Journal of Science and Technology, Vol.7, No.4, pp.227-238

4. M Roungu Ahmmad, Dr. Saiful Haque (**2014**), Providing Electricity by Digester Types on Biogas Productions from Municipal Solid Waste in Dhaka City, Bangladesh, International Journal of Energy, Information and Communications, Vol.5, Issue 3, pp.13-22

3. M Roungu Ahmmad, Dr. Saiful Haque (**2014**), Statistical Analysis of the Wind Resources at the Importance for Energy Production in Bangladesh, International Journal of u- and e- Service, Science and Technology, Vol.7, No.2, pp.127-136

2. Roungu Ahmmad, Md Sanwar Hossain, Md Matair Rahman (**2013**), Markovian Migrational Models a Dynamics of Repeat Migration: A Markov Chain Analysis and Application, International Journal of Science and Technology, Volume 2, No. 4, April, 2013, pp 285-290

1. **Rest can be found, Here**

Article in Pre-/Submission

6. Md Roungu Ahmmad, PhD, Substance Use and Co-occurring Oppositional Defiant Disorder Among U.S. High School Students: Evidence from Balanced Cohort and Machine Learning Analysis

5. Md Roungu Ahmmad, PhD, Coastal Proximity, Severe Weather, and Post-Traumatic Stress Disorder–Related Mental Health Signals in Florida Using Social Media Data, 2022 - 2025

4. Md Roungu Ahmmad, PhD, A Community-Level Mental Health Burden Index: Development, Validation, and Spatial Vulnerability to Inform Decision Making

3. Md Roungu Ahmmad, Fazlay Faruque, Md Tareq Ferdous Khan, Md Polash Ali, Xiaoli Zhang, A Community-Level Mental Health Burden Index: Development, Validation, and Spatial Vulnerability to Inform Decision Making, Nature Mental Health (Working in Progress)

2. Md Roungu Ahmmad, Wondwosen Yimer, William Hillegass, Chiu-Hsieh "Paul" Hsu, Adolfo Correa, Michael Hall, Adebamike Oshunbade, Ken Butler, Robert Mentz, Amil Shah, Yuan-I Min (2024–working), Joint Analysis for Recurrent Heart Failure Events and Longitudinal Lipid Trajectories; an Application of the Jackson Heart Study (Reviewing)

1. Roungu Ahmmad, Morshed Alam, Bayesian hierarchical model for determining non-inferiority margins for the time-to-event outcomes in a clinical trial for the mixed populations in clinical trials, Working in progress

PRESENTATION (INVITED AND CONTRIBUTED)

Invited Talks/Workshops/Panels

3. Machine Learning and Data Science in Health Care: Methods, Challenges, and Opportunities, SMH Sarasota Campus: 2026 SMHCS Interprofessional Research Conference

2. Advancing Biostatistics and Data Science: Sharing Expertise and Building Collaboration, Sleep and Health Innovations in Neurobehavioral (SHINE) Science Center, USF

1. Md Roungu Ahmmad, PhD, MS, Xiaoli Zhang, PhD, MS, Ukamaka Oruche, PhD, RN, PMHCNS-BC, FAAN, Substance Use and Oppositional Defiant Disorder Among U.S. High School Students: Evidence from Causal Inference and Machine Learning Approaches, International Conference on Applied Statistics and Data Science 2025, Universtiy of Dhaka, Bangladesh

Symposiums/ Oral Presentations

13. Itoro Ukpong, Md Polash Ali, Harry Pantazopoulos, and Md Roungu Ahmmad*, Frequency Patterns of Sugar Sweetened Beverage Intake and Autism; Evidence from Survey-Weighted and Machine Learning Frameworks, USF Health Research Day, 2026

12. Itoro Ukpong, BS, Md Roungu Ahmmad, PhD*, Association Between Birth Order and Autism : The Modifying Role of Sibling Gender Composition, USF Health, College of Nursing, 2025

11. Md Roungu Ahmmad, A Community-Level Mental Health Burden Index: Development, Validation, and Spatial Vulnerability to Inform Decision Making, JSM

10. Morshed Alam, Md Roungu Ahmmad Competing-Risk Analysis of Surgery and Radiation Sequencing in Higher-Stage Prostate Cancer, JSM

9. Md Roungu Ahmamd, Multimodality Treatment and Survival in Primary Cardiac Malignancies: Evidence from Competing-Risk and Machine-Learning Analyses, JSM

8. Md Roungu Ahmmad, Joint Modeling Approach for Zero-Inflated Over-Dispersed Counts and Longitudinal Outcomes, JSM

7. Md Roungu Ahmmad, A Comprehensive Competing Risk of Survival Analysis for Kidney Cancer Patients in the United States, JSM

6. Md Roungu Ahmmad, A Community-Level Mental Health Burden Index: Development, Validation, and Spatial Vulnerability to Inform Decision Making (Submitted JSM Conference)

5. Md Roungu Ahmmad, Squamous Cell Carcinoma of Anal Canal: Cancer Stages, Treatments and Mortality in the United States, Department of Data Science, UMMC.

4. Md Roungu Ahmmad, The Association of Supportive Networks and Depression Among COVID-19 Affected Elderly Populations in the United States, Department of Data Science, UMMC.

3. Md Roungu Ahmmad, Competing Mortality Risk for Heart, Lung & Bronchus, and Bone & Joints Soft Tissue Sarcomas in the United States, Department of Data Science, UMMC.

2. Md Roungu Ahmmad, Joint Modeling and its applications for Medical Health Record Data, Annual Meeting of the Alabama-Mississippi Chapter of the American Statistical Association.

1. Md Roungu Ahmmad, An Introduction of Data Science and application in Biomedical Science, Department of Data Science, University of Mississippi Medical Center.

PROFESSIONAL SERVICES

US Food and Drug Administration (FDA)

01/2023- 08/2024	Statistical reviewer of new drugs application (NDA) or biologic license application (BLA) for evaluating therapeutic intervention of drug development process https://www.fda.gov/media/185483/download Extensive experience in developing and evaluating protocols and statistical analysis plans (SAPs) Efficiently evaluate & reproduce clinical study report (CSR) submitted with NDA/BLA for clinical trials efficacy and safety analysis Extensive experience in understanding ICH guidance; E9(R1) statistical principles for clinical trials, multiple endpoints in clinical trials, non-inferiority clinical trials, etc

Services at University of South Florida

2026 – Present	Judge, USF Health Research Day, University of South Florida
2026 – Present	Member, CRSC 2-Subcommittee Reviews of Internal Proposals – External Promotion of Research, USF
2025 – Present	Member, Evaluations Committee, College of Nursing, USF

Services at University of Southern Mississippi

2024 – 2025	Biostatistics and research techniques program development
2024 – 2025	Course director, Biostatistics -I, II, Statistical Computations and Research Techniques

Services at Jagannath University, Dhaka-1100

2011 – 2018	Curriculum committee and courses development
2014 – 2018	Research development, program evaluation committee, and community engagement
2014 – 2018	Graduate Committee, oversee graduate admissions and progression, review theses/dissertations
2014 – 2018	Student Affairs Committee, address student success, retention, and advising issues

PROFESSIONAL TRAINING/WORKSHOP

- Summer Grant Writing Workshops program, USF 2025
- Policy development, evaluation, restoration planning, grants management, and stakeholder outreach, Gulf Research Program Science Policy Fellowships, 2025
- Ground Rounds, John D Bower School of Population Health, University of Mississippi Medical Center, Jackson, MS

TEACHING AND ADVISING

Mentoring

- Shafiqul Islam: Study of depressive symptoms among Jagannath University students by education support and sociodemographic factors
- J.M.Jillur Rahman: The present state of women's empowerment in the old Dhaka City of Bangladesh
- Farzana Afrin: A study of the effect of internet use among university students in Dhaka, Bangladesh
- Mukta Kar: A study of the impact of smoking on young college students in the old Dhaka city areas
- Sharmin Rahman: A study on the effects of Indian serials on teenage girls in Dhaka, Bangladesh
- Hiron Chandra Mazumder: A Study on Domestic Violence Against Girls in the old Dhaka, Bangladesh

Course Teaching/Developing

- Biostatistics I, and Biostatistics II
- Research Techniques-Study Design and Computation
- Introduction to Statistics
- Introduction to Statistics
- Introduction to Probability
- Linear Algebra
- Probability Distributions
- Fundamentals of Computer Programming
- Regression Analysis
- Applied Multivariate Analysis
- Survival Analysis
- Generalized Linear Models

REFERENCES

- Reference will be provided upon request