CONTACT INFORMATION

Field	Information
Full Name	**Md Roungu Ahmmad, PhD, MSc**
Academic Position	Assistant Professor of Biostatistics and Data Science
Institution	University of South Florida
College	USF Health, College of Nursing
Location	Tampa, Florida, USA
Email	Ahmmad@USF.edu
Phone	(213) 952-8248
Work Authorization	Lawful Permanent Resident (Authorized to Work in the U.S.)

02. RESEARCH INTERESTS

Research Area	Research Focus
Statistical Methodology Development	Joint modeling of multivariate longitudinal outcomes, recurrent events, zero-inflated and over-dispersed count data, survival analysis, and competing risks.
Artificial Intelligence and Machine Learning	Statistical learning, predictive modeling, classification, model validation, and data-driven clinical decision support.
Precision Medicine and Treatment Decision	Treatment response prediction, patient stratification, treatment classification, and individualized clinical outcome assessment.
Drug Development and Clinical Trials	Clinical trial design, statistical analysis, efficacy and safety evaluation, and regulatory statistical science.
Biomedical and Population Health	Health disparities, spatial and spatiotemporal modeling, disease burden assessment, and population health analytics.

03. EDUCATION

03A. Academic Degrees

Year	Degree and Institution
December 2022	Doctor of Philosophy (PhD) in Biostatistics and Data Science; University of Mississippi (UMMC), Jackson, Mississippi, USA.
May 2020	Master of Science (MS) in Biostatistics and Data Science; University of Mississippi (UMMC), Jackson, Mississippi, USA.
June 2010	Master of Science (MSc) in Statistics, Biostatistics and Informatics; University of Dhaka, Dhaka, Bangladesh.

June 2008	Bachelor of Science (BSc) in Statistics, Biostatistics and Informatics; University of Dhaka, Dhaka, Bangladesh.

03B. Professional Certifications and Specialized Training

August 2022	Professional Certificate in Statistical Genetics; Summer Institute in Statistical Genetics (SISG), University of Washington, Seattle, Washington, USA.
August 2013	Professional Certificate in Research Methodology and Application; National Institute of Population Research and Training (NIPORT), Dhaka-1100, Dhaka, Bangladesh.
July 2009	Professional Certificate in SPSS Professionals and Researchers; Department of Statistics, Biostatistics & Informatics, University of Dhaka, Bangladesh.
July 2008	Professional Certificate in Research Methodology and Applications; Department of Public Health, BRAC University, Dhaka, Bangladesh.

03C. Doctoral Dissertation and Research

Dissertation Title	Statistical Joint Modeling of Multivariate Longitudinal and Multiple Time-to-Event Outcomes.
Research Focus	Development and evaluation of joint statistical models for multivariate longitudinal measurements, recurrent events, and count outcomes.
Methodological Contributions	Joint modeling of correlated longitudinal and event processes, including zero-inflated and over-dispersed count data.
Applications	Longitudinal and event-history analysis, multiple clinical outcomes, and evaluation of therapeutic interventions.

04. ACADEMIC AND PROFESSIONAL APPOINTMENTS

04A. Academic Faculty Appointments

Years	**Position and Institution**
5/2025-Present	Assistant Professor of Biostatistics and Data Science; USF Health, College of Nursing, University of South Florida, Tampa, Florida, USA.
8/2024-5/2025	Assistant Professor of Biostatistics and Epidemiology; School of Health Professions, University of Southern Mississippi, Hattiesburg, Mississippi, USA.
1/2017-8/2018	Assistant Professor of Statistics (Adjunct); Department of Statistics, Mawlana Bhashani Science and Technology University, Tangail, Bangladesh.

2/2011-8/2018	Assistant Professor of Statistics; Department of Statistics, Jagannath University, Dhaka, Bangladesh.
6/2010-2/2011	Senior Lecturer in Statistics; Department of Electrical and Electronics Engineering, University of Information Technology and Sciences, Dhaka, Bangladesh.
1/2010-6/2010	Lecturer in Statistics; Department of Business Administration, World University of Bangladesh, Dhaka, Bangladesh.

04B. Pharmaceutical Drug Development and Regulatory Science Appointments

6/2023-8/2024	Mathematical Statistician; Office of Biostatistics, Center for Drug Evaluation and Research (CDER), U.S. Food and Drug Administration (FDA), Silver Spring, Maryland, USA.
3/2023-6/2023	Biostatistician and Data Scientist; Center for New Drug Application (NDA), U.S. Food and Drug Administration (FDA), Silver Spring, Maryland, USA.

04C. Research and Data Science Appointments

12/2022-3/2023	Data Scientist IV; Epidemiology Data Center, University of Pittsburgh, Pittsburgh, Pennsylvania, USA.
1/2020-11/2022	Research Assistant; Jackson Heart Study, Jackson, Mississippi, USA.
8/2018-1/2020	Graduate Research Assistant; Department of Data Science, University of Mississippi Medical Center, Jackson, Mississippi, USA.

05. STATISTICAL METHODOLOGY, AI, AND CLINICAL TRIAL RESEARCH

05A. Statistical Methodology and Research Contributions

Research Domain	**Methodological Expertise and Contributions**
Statistical Joint Modeling	Multivariate longitudinal outcomes, recurrent events, and zero-inflated over-dispersed counts.
Survival Analysis	Competing risks, recurrent events, time-dependent outcomes, and survival prediction.
Causal Inference and Treatment Evaluation	Propensity scores, inverse probability weighting, covariate balancing, and treatment-effect estimation.
Psychometrics and Scale Development	Scale construction, reliability, construct validity, and multidimensional measurement.

Community-Level Index Development	Development and validation of composite indices for mental health, chronic disease, and health disparities.
Multivariate and Latent Variable Modeling	PCA, exploratory and confirmatory factor analysis, and dimensionality reduction.
Spatiotemporal Modeling	Spatial autocorrelation, geographic clustering, and disease burden modeling.
Statistical Learning and Model Evaluation	Predictive modeling, classification, model comparison, and performance evaluation.

05B. Artificial Intelligence and Machine Learning Research

AI-Driven Health Outcome Prediction	Clinical outcomes, disease progression, mortality, and risk stratification.
Treatment Response and Classification	Treatment prediction, patient stratification, and clinical decision support.
Machine Learning in Cancer Research	Survival analysis, treatment outcomes, and predictive biomarkers.
AI and Precision Medicine	Individualized risk prediction, treatment heterogeneity, and precision health.
AI in Population Health	Spatial analytics, chronic disease burden, and geographic health disparities.
AI in Neurological and Behavioral Health	Alzheimer's disease, autism, mental health, and risk prediction.
Predictive Model Development	Supervised learning, classification, regression, discrimination, and calibration.

05C. Drug Development and Clinical Trial Expertise

FDA Regulatory Statistical Review	Statistical review of 40+ IND/NDA submissions, including study design, efficacy, and safety.
Clinical Trial Design	Randomization, endpoint selection, treatment comparisons, and trial methodology.

Statistical Analysis Planning	Statistical analysis plans, estimands, hypotheses, and sensitivity analyses.
Sample Size and Statistical Power	Sample size estimation, power calculations, and statistical assumptions.
Efficacy and Safety Evaluation	Treatment efficacy, adverse events, clinical endpoints, and safety outcomes.
Interim and Final Trial Analyses	Interim and final analyses, treatment effects, and statistical interpretation.
Advanced Clinical Trial Methods	Longitudinal models, survival analysis, missing data, and subgroup analyses.

06. PROFESSIONAL PUBLICATIONS

06A. Accepted or Under Peer-Reviewing

No.	Peer-Review
07	Ahmmad, M. R., Shahinuzzaman, M., Sleep Rhythm Profiles, Family Resilience, and Attention-Deficit/Hyperactivity Disorder Among US Children, The Lancet Child & Adolescent Health (Peer Review)
06	Cuneyt Tegin, MD, FAPA, FASAM, Kateryna Koval, MD, Md Roungu Ahmmad, PhD, MS, Charles Bui, BS Alya Ocalir, BS. Quantifying Placebo-Associated Responses in Asthma Using Objective Lung Function: A Systematic Review and Meta-analysis, Annals of Allergy, Asthma & Immunology (Peer Review)
05	Ahmmad, M. R., Ali, M.P., Lavelle, A., Developmental Autopilot Dominance, Sleep Rhythm Profiles and ADHD in U.S. Children and Adolescents, Social Psychiatry and Psychiatric Epidemiology (Peer review)
04	Ahmmad, M. R., Development and Temporal Validation of a Multidimensional Framework for ADHD-Related Functioning in US Children and Adolescents, International Journal of Methods in Psychiatric Research (Peer Review)
02	Ahmmad, M. R., Faruque, F. Machine learning and spatial analytics of rural-urban chronic disease inequities in the U.S. Deep South, Nature Digital public health (Accepted)
03	Ahmmad, M. R., Stearns, M., Khan, M. T. F., Zhang, X., Faruque, F., Oruche, U. Climate-related weather events and social media-derived anxiety and depression signals in Florida: A spatiotemporal analysis, The Journal of Climate Change and Health (Accepted)

02 Ahmmad, M. R. Household Food Insecurity and Autism Spectrum Disorder with Co-occurring Behavioral Problems in US Children: A Spatiotemporal Analysis, Journal of Autism and Developmental Disorders (Accepted)

01 Prognostic Analysis of Survival Disparities for Squamous Cell Carcinoma in the Anal Canal: The Role of Gender, and Marital Status in the United States, International Journal of Colorectal Disease (Accepted)

06B. Statistical Methodology and Methods Development

03 Ahmmad, M. R., Faruque, F., & Zhang, X. (2026). The obesity-related chronic disease index (ORCDi), a novel composite metric to quantify ORCD burden: an ecological study across US census tracts. *The Lancet Regional Health–Americas*, *61*.

02 Ahmmad, M. R., Hossain, M. S., Rahman, M. M., & Rahman, A. (2013). Markovian Migrational Models a Dynamics of Repeat Migration: A Markov Chain Analysis and Application. *International Journal of Science and Technology*, *2*(4).

01 Hossain, M. S., Islam, M. A., Moloy, D. J., & Ahmmad, M. R. (2013). Local likelihood estimation for the proportional hazards model and comparison with global likelihood. Journal of Science and Technology, 3(2), 391–398.

06C. Applied Statistics, Artificial Intelligence, and Biomedical Research (Since 2013)

21 Ahmmad, M. R., Ali, M. P., Ukpong, I., & Pantazopoulos, H. (2026). Sugar-sweetened beverage intake, food affordability, and autism spectrum disorder among young US children: A national survey analysis. Clinical Epidemiology and Global Health, 102494.

20 Ahmmad, M. R., Alam, M., Baine, M., & Khan, M. T. F. (2026). Multimodality treatment and survival in primary cardiac malignancies: evidence from competing-risk and machine learning analyses. *Clinical and Translational Oncology*, 1-13.

19 Shah, K. C., Littlestone, E., Ahmmad, M. R., Wang, C., Xu, Y., & Zhang, X. (2026). A Cross-Region Meta-Analysis and Machine Learning Identifies a 37-Gene Signature Associated with Alzheimer's Disease. Biomedicines, 14(9), 2032.

18 Ahmmad, M. R., Faruque, F., Rocconi, R., Hossain, E., & Musarikandy, S. M. (2026). Survivability in patients with rare sigmoid colon adenocarcinoma variants: exploring the influence of rural–urban continuum codes and social determinants of health in the USA. *Cancer Causes & Control*, *37*(8), 123.

17 Ahmmad, M. R., Kothiya, S. H., & Oruche, U. (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*, 1-12.

16 Littlestone, E. D., Ahmmad, M. R., & Zhang, X. (2026). Transcriptional programs of precursor-exhausted CD8+ T cells associated with checkpoint blockade response in NSCLC. *Cancer Research*, *86*(7_Supplement), 7430-7430.

15 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.

14 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.

13 Ahmmad, M. R., Khan, M. T. F., Hossain, E., Musarikandy, S., & Faruque, F. (2026). Competing mortality risk from COVID-19, cerebrovascular diseases, and ischemic heart disease among US cancer patients by race, income, and rurality. *Discover Public Health*, *23*(1), 147.

12 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.

11 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.

10 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.

09 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.

08 Ahmmad, R., Burns, P. A., Alam, A., Simino, J., Yimer, W., & Faruque, F. (2023). Understanding the Impact of Social Engagement Activities, Health Protocol Maintenance,

and Social Interaction on Depression During Covid-19 Pandemic Among Older Americans. J Neurol Disord Volume 11:1

07 Ahmmad, R., Faruque, F. (2023). Distribution of Obesity-related Health Outcomes across the Urban-Rural Commuting Area in Mississippi, Alabama, Louisiana, and Georgia, Diabetes Case Rep. 8:148

06 Ahmmad, R. (2023). Nomogram Based Survival Predictions of Patients with Soft Tissue Cancer Including Heart in the United States, J Clin Exp Pathol, Vol 13(3)

05 Ahmmad, M. R., & Islam, M. N. (2014). Impact of Disability on Quality of life of urban disabled people in Bangladesh. *International Journal of u-and e-Service, Science and Technology*, *7*(4), 227-238.

04 Ahmmad, M. R., & Haque, S. (2014). Providing electricity by digester types on biogas productions from municipal solid waste in Dhaka city, Bangladesh. *International Journal of Energy, Information and Communications*, *5*(3), 13-22.

03 Ahmmad, M. R. (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*, *7*(2), 127-136.

02 Ahmmad, M. R. (2014). The problems of the effective classroom teaching in Govt. colleges in Dhaka City. *Humanities and Social Sciences*, *2*(2), 17-22.

01 Ahmmad, M. R., Rahman, M. M., Hossain, M. S., Rahman, A. (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, January-February 2013

07. INVITED TALKS, CONFERENCE PRESENTATIONS, AND POSTERS

07A. Invited Talks and Research Seminars

No.	Year	Presentation and Venue
03	2026	Md Roungu Ahmmad, Age-Specific Sleep Sufficiency and Neurodevelopmental–Mental Health Comorbidity Profiles in U.S. Children with Autism Spectrum Disorder, Nursing Asia-Pacific, 8th Asia-Pacific Advanced Nursing Practice, Nursing Education and Leadership Conclave
02	2026	Ahmmad, M. R. From Data to Decisions: Role of AI in Driving Innovation in Patient Care and Research. Sarasota Memorial Hospital, Sarasota, Florida, USA.

01 2021 Ahmmad, M. R., Yimer, W., Hillegass, W., & Shu, P. Squamous Cell Carcinoma of Anal Canal: Cancer Stages, Treatments and Mortality in the United States. JSM Alabama Mississippi Chapter, University of Mississippi Medical Center

07B. Conference Oral Presentations

No.	Year	Presentation and Conference
08	2026	Ahmmad, M. R., Khan, M.T.F, Alam, M, Zhang, X., Developing a Community-Level Mental Health Burden Index to Inform Decision Making, Joint Statistical Meeting (JSM) 2026, Boston, USA.
08	2026	Alam, M, Ahmmad, M.R., Ahnaf, M.M., Zhan, X., Competing-Risk Analysis of Surgery and Radiation Sequencing in Higher Stage Prostate Cancer, Joint Statistical Meeting (JSM) 2026, Boston, USA.
07	2026	Khan, M. T. F., Mazumder, S., Ahmmad, M. R., Rjbongshi, A., Parvez, I., & Manik, M. M. R. National Trends and Regional Variations in Mental Health Disorders Among Older Adults Treated in the U.S. State Mental Health System. Clemson University Research Day.
06	2025	Ahmmad, M. R., Alam, M., Baine, M., & Khan, M. T. F. Multimodality Treatment and Survival in Primary Cardiac Malignancies: Evidence from Competing-Risk and Machine-Learning Analyses. Joint Statistical Meetings, Nashville, Tennessee, USA.
05	2025	Ahmmad, M. R., Zhang, X., & Oruche, U. 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.
04	2025	Ahmmad, M. R., Alam, M., & Twum, F. Predicting Causal Effects of Therapeutic Interventions in Cardiac Cancer Patients: A Competing Risks. Joint Statistical Meetings, Nashville, Tennessee, USA.
03	2023	Ahmmad, M. R., Alam, M., & Yimer, W. Joint Modeling Approach for Zero-Inflated Over-Dispersed Counts and Longitudinal Outcomes. Joint Statistical Meetings, Ontario, California, USA.
02	2022	Ahmmad, M. R., & Faruque, F. Nomogram-Based Breast Cancer Mortality Prediction in Men and Women with Different Cancer Treatments in the U.S. Between 2000 and 2017. American Public Health Association, USA.

01 2021 Ahmmad, M. R., Yimer, W., Hillegass, W., & Shu, P. Joint Modeling of Events and Longitudinal Measurement. Annual Meeting of the Alabama–Mississippi Chapter of the American Statistical Association, Jackson, Mississippi, USA.

07C. Conference Posters and Research Presentations

No.	Year	Poster and Venue
08	2026	Arianna Lavelle, Md Roungu Ahmmad, Family Cancer History and Disease-Specific Genetic Testing Among U.S. Women Aged 18-39 Years, USF Health, College of Nursing, University of South Florida.
07	2026	Adaixa P. Wilborn, PhD, Md Roungu Ahmmad, PhD, MSc, Diana Diaz, MPH, Dinorah Martinez Tyson, PhD, Sexual intimacy, body image, and couple satisfaction among Latina breast cancer survivors and their partners, IPOS 2026, Towards A Sustainable Psycho-oncology.
06	2026	Misra, R., Ahmmad, M. R., & Zheng, X. Sex- and Race-Specific Wound Healing Patterns Among Patients Treated at Comprehensive Wound Centers. Sarasota Memorial Hospital, Florida, USA.
05	2026	Ukpong, I., Ali, M. P., & Ahmmad, M. R. Frequency Patterns of Sugar-Sweetened Beverage Intake and Autism Spectrum Disorder Among U.S. Children: A Cross-Sectional Survey-Weighted and Machine-Learning Study. USF Research Day, University of South Florida.
04	2025	Ahmmad, M.R., Kothiya, S.H., Impact of Outdoor Activity and Sibling Gender Composition on Autism Spectrum Disorder: Evidence from the National Survey of Children's Health in the United States, APHA Program: Maternal and Child Health, Washington, DC, USA.
03	2025	Ukpong, I., & Ahmmad, M. R. Association Between Birth Order and Autism: The Modifying Role of Sibling Gender Composition. USF Health, College of Nursing, University of South Florida.
02	2022	Ahmmad, M.R., Simino, Z., Gene Expression and Therapeutical Intervention for Breast Cancer Patients; Joint modeling of recurrent and time-to-event outcomes, Big Data Health Science Center, University of South Carolina, USA.
01	2022	Ahmmad, M. R., Mahmud, I., Faruque, F., Uddin, M. N., Yimer, W., & Simino, J. A Comprehensive Competing Risk of Survival Analysis for Kidney Cancer Patients in the United States. Joint Statistical Meetings, Washington, DC, USA.

08. RESEARCH GRANTS AND FUNDING

08A. Funded Research Grants

Project / Funding Source	Role	Amount
SHINE Science Center Research Award, University of South Florida	PI	$7,500
CEED Research Project, University of South Florida	Co-I	$150,000
AI-Driven Sleep and Neuroinflammation Research in Alzheimer's Disease	Co-I	$25,000
AI/ML Research in Cancer Immunotherapy	Co-I	$12,500

08B. Pending Research Grant Applications

Parkinson's Disease-Specific Multimorbidity Index and Risk Prediction	PI	$149,000
NIH Trauma and Resilience Research	Co-I	$4,481,441
Cancer Distress Research, Tampa General Hospital	Co-I	$40,000
Autism, Sleep, and Behavioral Assessment	PI	$50,000
NIH Social Network Research	Co-I	$439,656
NIH Multilevel Mixed-Methods Research	Co-I	$426,116
NIA Sex Differences and Circadian Research	Co-I	$396,840
Nuttall Women's Health Research	Co-I	$358,344
Florida Department of Health Social Network Research	Co-PI	$348,744
Moffitt Cancer Distress Research	Co-I	$50,000

08C. Previously Submitted, Not Funded

NIH Biomedical Workforce Research	Co-I	$2,691,917
American Cancer Society ECLIPSE Research	Co-I	$929,016
USF Research Proposal	PI	$25,000
USF Research Proposal	Co-PI	$20,000

09. TEACHING AND RESEARCH MENTORSHIP

09A. University Teaching Experience

Institution	Teaching Area
University of South Florida	Biostatistics, statistical methodology, and graduate research training.
University of Southern Mississippi	Biostatistics, epidemiology, and applied statistical methods.
Jagannath University	Statistics, probability, statistical inference, mathematics and applied data analysis.
Mawlana Bhashani Science and Technology University	Statistics and quantitative research methods.
University of Information Technology and Sciences	Statistics and quantitative methods.
World University of Bangladesh	Statistics and applied quantitative analysis.

09B. Research Mentorship and Student Supervision

Mentorship Area	Academic Contributions
Graduate Research Mentorship	Guidance in statistical methodology, research design, and quantitative analysis.
Thesis and Dissertation Research	Statistical consultation, methodological development, and research interpretation.
Biomedical Research Training	Mentorship in clinical research, population health, and biomedical data analysis.
Research Dissemination	Guidance in manuscript preparation, scientific presentations, and scholarly publication.

09C. Curriculum Development and Statistical Training

Academic Activity	Contributions
Curriculum Development	Biostatistics, research methodology, and quantitative research education.
Statistical Training	R programming, applied statistical analysis, and reproducible research.

Interdisciplinary Education	Statistical methods training for health sciences and biomedical researchers.

10. STATISTICAL CONSULTING AND COLLABORATIVE RESEARCH

10A. Institutional Statistical Consulting and Research Collaboration

Period	Institution and Position	Statistical Consulting and Research Responsibilities
2025-Cont.	University of South Florida	Statistical collaboration in faculty research, grant development, clinical studies, and graduate projects.
2024-2025	University of Southern Mississippi	Statistical consultation in study design, quantitative analysis, modeling, and interpretation.
2022-2023	University of Pittsburgh	Data science and statistical analysis in epidemiological research.
2023-2024	U.S. Food and Drug Admin	Regulatory statistical review of drug submissions, clinical trials, efficacy, and safety.
2020-2022	Jackson Heart Study	Statistical support for cardiovascular and epidemiological research.

10B. Statistical Consulting Across the Research Lifecycle

Consulting Domain	Methodological Contributions
Research Design and Planning	Study design, research objectives, outcome selection, and analytical feasibility.
Grant Development	Statistical methodology, sample size, power analysis, and proposal development.
Data Management and Quality	Data preparation, variable coding, missingness, and quality assessment.
Statistical Modeling and Inference	Regression, survival, longitudinal, multilevel, and multivariate analysis.
Advanced Analytics and AI/ML	Predictive modeling, statistical learning, and model validation.
Scientific Reporting	Results interpretation, manuscript preparation, and statistical peer-review responses.

Manuscript and Peer-Review Support	Statistical input into manuscript development, analytical revisions, and responses to methodological questions.

10C. Interdisciplinary Collaborative Research Areas

Research Domain	Collaborative Statistical Contributions
Oncology and Cancer Outcomes	Survival analysis, competing-risk modeling, treatment-outcome evaluation, and machine learning applications in cancer research.
Neurodevelopmental Disorders	Statistical and predictive modeling research involving autism, ADHD, Alzheimer's disease, and related neurological outcomes.
Mental Health and Behavioral Research	Population-based analyses of psychiatric conditions, substance use, behavioral health, and mental health disparities.
Sleep and Circadian Health	Quantitative research involving sleep sufficiency, sleep behaviors, circadian health, and associated clinical outcomes.
Cardiovascular and Chronic Diseases	Epidemiological analysis, chronic disease outcomes research, and statistical modeling of population health data.
Spatial Epidemiology and Public Health	Community-level burden indices, geographic disparities, spatial clustering, and environmental and social determinants of health.

10D. Collaborative Grant Development and Research Proposal Support

Research Activity	Contributions
Interdisciplinary Grant Applications	Statistical contributions to NIH and other research proposals.
Statistical Analysis Planning	Development of statistical approaches aligned with study objectives, research designs, and proposed outcomes.
Advanced Analytics Integration	Incorporation of statistical modeling, machine learning, and population-health analytics into collaborative research plans.
Research Team Collaboration	Methodological input to interdisciplinary research teams during proposal development and research planning.

10E. Clinical Trial and Regulatory Statistical Consultation

Consulting Area	Regulatory and Clinical Research Contributions
Clinical Trial Design and Protocol Review	Statistical evaluation of clinical trial protocols and methodological approaches supporting drug development.

Statistical Analysis Plans	Review of statistical analysis plans, endpoint definitions, and planned efficacy and safety analyses.
Efficacy and Safety Evaluation	Statistical assessment of clinical trial evidence submitted in support of regulatory decisions.
Independent Statistical Verification	Reproduction and validation of statistical analyses from regulatory submissions.
Regulatory Statistical Methods	Application of FDA and ICH statistical principles, including multiplicity adjustment and noninferiority methodologies.

10F. Statistical Computing and Analytical Support

Technical Area	Statistical and Computational Expertise
Statistical Programming	R, SAS, Stata, SPSS, and Python for statistical and research applications.
Advanced Statistical Analysis	Regression, survival, longitudinal, multilevel, multivariate, and related analytical methods.
Artificial Intelligence and Machine Learning	Predictive modeling and statistical learning applications in biomedical and population-health research.
Research Data Analysis	Quantitative data management, statistical evaluation, analytical interpretation, and reporting.

11. ACADEMIC SERVICES, PROFESSIONAL LEADERSHIP, AND INSTITUTIONAL COMMITTEES ACROSS UNIVERSITY AND ABROAD

11A. University and College-Level Service

Period	Institution	Committee / Service Role
2025-Present	University of South Florida	Member, PhD Curriculum Committee. Participate in doctoral curriculum review and academic program development.
2025-Present	University of South Florida	Member, Evaluations Committee. Contribute to college-level evaluation activities.
2025-Present	University of South Florida	Member, Awards Committee. Participate in committee activities related to academic recognition and awards.
2025-Present	University of South Florida	Member, CRSC-2 Subcommittee. Review and evaluation internal research proposals.

2025-Present	University of South Florida	Judge, USF Health Research Day. Evaluate research presentations and provide scholarly feedback.

11B. Scientific Review and Research Oversight

2026-Present	Tampa General Hospital Cancer Institute	Principal Biostatistical Reviewer and SRC Member; methodological review of cancer research protocols.
2025-Present	University of South Florida	Principal Biostatistical Reviewer and IRB Member; statistical and methodological protocols review.
2025-Present	University of South Florida	Member, CRSC-2 Subcommittee. Contribute to scientific assessment of internal research proposals.

11C. Departmental and Academic Committee Service

2014-2018	Jagannath University	Graduate Committee Member; graduate admissions, academic progression, and thesis/dissertation review.
2014-2018	Jagannath University	Student Affairs Committee Member; academic advising, student engagement, and student success.
2014-2018	Jagannath University	Research Development, Program Evaluation, and Community Engagement Committee Member.

11D. Academic Program and Curriculum Leadership

2025-Present	University of South Florida	PhD Curriculum Committee membership supporting doctoral academic program development.
2024-2025	University of Southern Mississippi	Course Director: Biostatistics I, Biostatistics II, Statistical Computations, and Research Techniques.
2014-2018	Jagannath University	Graduate Committee membership involving academic progression and graduate research review.

11E. Student Engagement and Professional Development Service

March 2026	Pre-Health Association of Minority Students (PHAMS), University of South Florida	Invited Healthcare Panel Speaker. Shared academic and professional experiences in biostatistics and public health, discussed healthcare research career pathways, and participated in case-based learning and mentorship activities for undergraduate students.

11F. Regulatory and Public Health Scientific Service

2023–2024	U.S. Food and Drug Administration, Center for Drug Evaluation and Research	Served on multidisciplinary regulatory review teams, providing statistical evaluation of clinical trial evidence, methodological assessment of regulatory submissions, and independent verification of efficacy and safety analyses supporting drug development decisions.

12. EDITORIAL ACTIVITIES AND SCHOLARLY PEER REVIEW

12A. Editorial Board Member and Peer Review for Scientific Journals

Period	Journal	Scholarly Role
2024-Present	Journal of Behavior Sleep Medicine	Editorial Board Member; Ad Hoc Reviewer
2025-Present	Journal of Public Health Research, SAGE	Editorial Board Member; Ad Hoc Reviewer
2024-Present	Journal of Autism and Developmental Disorders	Ad Hoc Reviewer
2025-Present	Autism	Ad Hoc Reviewer
2023-Present	Journal of Alzheimer's Disease	Ad Hoc Reviewer
2024-Present	BMC Psychology	Ad Hoc Reviewer
2024-Present	JAACAP Open	Ad Hoc Reviewer

12B. Areas of Scholarly Peer-Review Expertise

Research Area	Review Expertise
Biostatistics and Statistical Methodology	Study design, statistical methods, analytical rigor, and interpretation.
Autism and Neurodevelopmental Disorders	Autism, developmental outcomes, and behavioral health research.
Mental Health and Behavioral Sciences	Psychiatric disorders, behavioral health, and mental health epidemiology.
Neurodegenerative Diseases	Alzheimer's disease and neurodegenerative research.
Epidemiology and Public Health	Population-based research, epidemiological methods, and public health outcomes.

12C. Scientific and Methodological Review Activities

Review Domain	Scholarly Contributions

Study Design and Methodological Evaluation	Assess the appropriateness of research designs and statistical methods in submitted manuscripts.
Statistical Analysis and Interpretation	Evaluate statistical approaches, reported findings, and the alignment of conclusions with analytical evidence.
Scientific Reporting and Research Quality	Provide constructive feedback on methodological clarity, statistical reporting, and scientific interpretation.
Manuscript Evaluation	Contribute independent scholarly assessments and recommendations through journal peer-review processes.

12D. Related Scientific Review Service

Period	Institution	Review Role
2026-Present	Tampa General Hospital Cancer Institute	Principal Biostatistical Reviewer and Member, Scientific Review Committee.
2025-Present	University of South Florida, College of Nursing	Principal Biostatistical Reviewer and Member, Institutional Review Board.
2025–Present	University of South Florida	Member, CRSC-2 Subcommittee for Internal Research Proposal Review.

13. AWARDS, HONORS, AND ACADEMIC RECOGNITION

13A. Research Awards and Institutional Recognition

Date	Award / Recognition	Awarding Institution
April 2026	Spring Publications Subvention Grant (PSG)	University of South Florida, Tampa, Florida, USA
September 2025	SHINE Science Center Research Award	University of South Florida, Tampa, Florida, USA

13B. Competitive Conference and Research Travel Awards

Date	Award / Purpose	Awarding Institution
August 2022	Conference Travel Grant, American Public Health Association (APHA) Annual Meeting, Boston, Massachusetts	School of Population Health and Department of Data Science, University of Mississippi Medical Center
February 2022	Conference Travel Grant, Big Data Health Science Conference	University of South Carolina

August 2020	Conference Travel Grant, Joint Statistical Meetings (JSM), Washington, DC	Department of Data Science, University of Mississippi

13C. National and International Scholarships and Fellowships

Date	Scholarship / Fellowship	Awarding Institution / Organization
August 2022	Summer Institute in Statistical Genetics (SISG) Scholarship	University of Washington, Seattle, Washington, USA
August 2018	Fulbright Scholarship	University of Mississippi Medical Center, Jackson, Mississippi, USA
June 2006	Merit Scholarship	Department of Statistics, University of Dhaka, Bangladesh

13D. Academic Excellence and Merit Awards

Date	Award / Honor	Awarding Institution
August 2018	Dean Award	John D. Bower School of Population Health, Department of Data Science, University of Mississippi Medical Center
June 2006	Kazi Motahar Hossain Award	Department of Statistics, University of Dhaka, Bangladesh
June 2006	Book Prize	Department of Statistics, University of Dhaka, Bangladesh

14. TECHNICAL SKILLS AND COMPUTATIONAL EXPERTISE

Technical Domain	Skills and Expertise
Statistical Programming	R, SAS, Python, Stata, SPSS, EAST.
Statistical Computing	Data processing, statistical modeling, simulation, and reproducible analysis.
Artificial Intelligence and Machine Learning	Predictive modeling, classification, and model evaluation.
Software Development and Cloud Computing	Git, Docker, Google Cloud Platform, VS Code, Visual Studio, PyCharm.
Data Visualization and Reporting	Statistical graphics, interactive dashboards, and scientific reporting.

Biomedical and Regulatory Analytics	Clinical trials, pharmaceutical research, and regulatory data analysis.

15. PROFESSIONAL MEMBERSHIPS AND ACADEMIC AFFILIATIONS

15A. National and International Professional Associations

Professional Organization	Membership Status
American Statistical Association (ASA), United States	Life Member
American Public Health Association (APHA), United States	Member
Bangladesh Statistical Association (BSA), Bangladesh	Life Member
International Bangladeshi Statistical Association (IBSA)	Life Member

15B. Statistical and Data Science Academic Associations

Professional / Academic Organization	Membership Status
Data Science Bangladesh	Life Member
JNU Statistics Department Alumni Association, Bangladesh	Life Member
DU Statistics Department Alumni Association, Bangladesh	Life Member

15C. University and Institutional Alumni Associations

Academic Organization	Membership Status
UMMC Alumni Association, US	Life Member
UMMC Department of Data Science Alumni Association, US	Life Member
Dhaka University Alumni Forum Inc., DC-MD–VA Area, US	Life Member

18. PROFESSIONAL REFERENCES

18A. Academic and Research References

Reference Information	Details
Academic Reference	Available upon request.
Research and Methodological Reference	Available upon request.
Professional and Institutional Reference	Available upon request.