FARIA YEASMIN RAHA

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INTERESTS

Transportation Safety, Traffic engineering, Transportation Planning, Statistical and Spatial Analysis

EDUCATION

Master of Science – Civil Engineering   **Expected July 2024**
Northern Arizona University   **GPA: 4.00**
- Selected courses: Advanced Concepts in Traffic Safety, Urban Transportation Planning, Intelligent Transportation Systems, Traffic Study and Signal, Statistics, Map Design and GIS

Bachelor of Science - Civil Engineering   **September 2019**
Bangladesh University of Engineering and Technology
- Selected Course: Transportation Planning and Traffic Engineering, Pavement Design and Railway Engineering, Highway Materials and Traffic Engineering Design
- Thesis: Detection of FRP debonding in I-Girder by vibration monitoring

EXPERIENCE

Graduate Research Assistant   **January 2023 - Present**
AZTrans: The Arizona Laboratory for Applied Transportation Research   **Flagstaff, Arizona**
Northern Arizona University
- Conducted a comprehensive literature review on existing leading pedestrian interval (LPI) guidelines and prepared a memorandum for the City of Phoenix
- Identified priority pedestrian treatment locations through analysis of pedestrian involved crashes within proximity to signalized intersections.
- Developed crash frequency models to examine the impacts of the factors considering different LPI guidelines on pedestrian crashes with turning vehicles.
- First-authored three papers presented at TRB Annual Meeting 2024 and currently working towards journal submissions on those works.
- Won the best graduate research paper award by ITS Arizona Annual Meeting 2023 for the research on LPI.

Structural Engineer   **October 2020 - August 2021**
ARMAN Engineering Ltd.   **Dhaka, Bangladesh**
- Performed structural design and analysis of different components of Façade using STAAD Pro.
- Prepared detailed structural reports and presentations for clients.

PUBLICATIONS

Where to Implement Leading Pedestrian Intervals (LPIs): An Examination of Turning Vehicle-Pedestrian Crashes at Signalized Intersections. *F. Raha, A. M. Eschen, S. R. Gehrke, E. Smaglik, & B. J. Russo. Transportation Research Board 103rd Annual Meeting*

Assessing the Impact of Vehicle Type on Pedestrian and Bicyclist Crash Injury Severity. *F. Raha, B. J. Russo, & S. R. Gehrke. Transportation Research Board 103rd Annual Meeting*

Investigating the Impact of the COVID-19 Pandemic on Traffic Crash Injury Outcomes among Different Demographic Groups. *F. Raha, B. J. Russo, & A. Ryan. Transportation Research Board 103rd Annual Meeting*

An Appraisal of Hydroplaning Pavement Surface Improvement Materials and Assessment Models. *F. Raha, A. Huq, & Z. Probha. Annual Conference of the Canadian Society for Civil Engineering (CSCE), 2022*

SKILLS

- GIS software **ArcGIS Pro** and macrostimulation software **VISSIM**
- Statistical modeling tools **R Programming**, and **SPSS**
- Data visualization and programming software **MATLAB** and **Python**
- Structural analysis software **STAAD Pro**
- Professional proficiency in English. Regularly communicating with peers and professors.

ACADEMIC PROJECTS

Addressing Parking Problem through Intelligent Transportation Systems (ITS) Technology, NAU CENE 546
- Develop three ITS solutions for the parking problem and evaluate the solutions using weighted objectives.
- Prepare a detailed engineering design for the chosen solution (Remote reservation system for parking).

Case Study: Intersection Analysis, NAU CENE 547
- Examined crash data of an intersection, prepare condition diagram and collision diagram.
- Conducted a road safety audit to identify potential safety issues and suggested countermeasures.

ORGANIZATION

Vice President, Institute of Transportation Engineers (ITE) Student Chapter, NAU
- Facilitated workshops and sessions between transportation professionals and students at ITE general meeting.
- Participated in ITE Trip generation study on a commercial facility, contributed to video data reduction, data analysis and prepared the report.
- 3rd position at ITE Mountain District Traffic Bowl, 2023

AWARDS & HONORS
- Best Graduate Research Paper Award at ITS Arizona 2023
- Craig Roberts Graduate Student Fellowship from Northern Arizona University, 2023

CONFERENCE ATTENDINGS
- TRB Annual Meeting, Washington, DC, 2024, 2023
- ATSSA Annual Convention and Traffic Expo, Phoenix, Arizona, February 2023
- PSR UTC Congress, Los Angeles, California, March 2023 (Presented my research)
- ITE Mountain District Annual Meeting, St. George, Utah, June 2023
- ITS Arizona Conference, Phoenix, Arizona, September 2023