

# CVEN 626 – Highway Safety

## Assignment #4

This assignment is due on Friday, October 17<sup>th</sup>, 2025. Please be ready to discuss the topic in Friday's lecture.

In a team of two or three, answer the questions below.

All questions are 20 points.

### Question 1

Using the dataset "Assignment 4 Dataset" explore the dataset using the techniques presented in Chapter 5 of the textbook (Lecture 4). Using these techniques, also answer the following questions:

How many crashes are weather related?

How many crashes are there each hour by time-of-day?

How many crashes occur by light conditions?

Conduct any other exploratory analyses you believe may be relevant.

### Question 2

Read one paper that discusses 'statistical models', 'crash-frequency', 'crash severity models' or 'Safety Performance Function' either in the title or keywords. Here is a sample of highway safety-related journals:

Accident Analysis & Prevention  
Analytic Methods in Accident Research  
Transportmetrica A: Transport Science  
Transportation Research Record  
Safety Science  
Journal of Safety Research  
Journal of Transportation Safety and Security

In about one page, summarize and criticize the paper (dataset-if any, methodology, conclusions, limitations, etc.). In the response, be specific about which part of your text is taken from the paper and which one is your viewpoint. All the team members need to

participate in the writing/review process. At the bottom of the summary, please write something along the following statement:

**(e.g., if a team of three) Jane Doe has prepared the initial draft review. John Doe has provided feedback and also participated in the review. John Doe II has provided the final review and edited the text. All three agreed with the content of the review. (basically, who did what?)**

Again, you need to put a statement at the bottom of the title/cover page indicating how AI was used. Even if it was not used, you need to write a statement that AI was not used in any capacity.