# Guided Workshop 4: Modeling Traffic Data

***Instructions:*** Download the file “Guided Workshop 4 – STARTER.xlsx”. I would recommend setting aside about an hour for this activity. When you are ready to start the workshop, open and begin the video “Guided Workshop 4: Modeling Traffic Data”.

The video will have optional in-video questions to help teach you and guide you along. You won’t submit this document, but it will be a good template/guide for the activity.

At the end, after you have completed the Excel file above, you will open the “Guided Workshop 4 Submission” quiz, where you will enter the answers to the questions at the end of this document.

***Background/Objective***

Poisson processes are encountered frequently in everyday applications involving the rate at which discrete events occur. In this workshop, you are going to attempt to ascertain if traffic patterns on US 36 between Boulder and Lyons are well described by a Poisson distribution and exponential distribution.

When you are done putting together your Excel file, answer the following questions in the “Guided Workshop 4 Submission Quiz” on Coursera (the text fields below are only for your benefit – you won’t be submitting this document).

1. What is the time between the 20th and 21st cars? Click here to enter text.
2. How many cars passed during the 20th minute? Click here to enter text.
3. How many minutes had 4 cars passing by? Click here to enter text.
4. What is the theoretical probability that there will be 8 cars in a 1-minute interval? Click here to enter text.
5. What is the theoretical probability that you will see fewer than 5 cars in a given 1-minute interval? Click here to enter text.

**That’s all! 😊**