SIM DATA CLEANING STEPS

To handle the sim data we must find a more specific range of rows within the data dump for each crash. This is because there is a significant amount of noise in the data, especially after the participant took over control and avoided the hazard.

To collect data for all variables you simply have to update the cell range so that the formulas know where to reference correctly. **DO NOT ADJUST THE FORMULAS**. Columns "H" and "I" will be where you adjust the row reference for each of the 27 crashes.

Column A is where the data from the sim exists. Each time the column headers (e.g., "time", "throttle", "brake", "steering", "speed", "ttc") are repeated, meaning you have moved to a new crash.

Step 1: Copy Cell Fill color for Crash 1

Step 2: Scroll to find the 1st row, where the speed variable reaches 15.99 or less. (this should work for 95% or the data). If somehow the participant didn't slow to this value, instead, find the first row where the steering input is greater than or equal to 7.00 or -7.00.

Step 3: Paste the cell fill color into Column "G" within the row you found in step 2.

Step 4: Scroll down to find the first row where **either** A. the speed reaches 0.9 or less. **or** B. The speed begins increasing by at least 1.00. This row indicates the end of the takeover. In A., the participant has come to a complete stop, in B. the participant safely avoided the collision and continued on the road.

Step 5: Flash-fill the color in Column "G" from the row you found in step 2 down to the row you found in step 4.

Step 6: Scroll up from Row you found in step 2.

A. 1st you are looking for if the TTC started the alert, before the participant took control. Find the first row where the TTC value was 1.95 or less. This row will be the upper bound. If there is no ttc value in this range. Go to B.

B. You are looking for the row where the first control input (brake or steering) that was made, where speed decreased to under 17.00. Then move to C1 or C2.

C1. If the brake input starts before steering (+ or – 7), then the upper bound goes to the row above the row you found in B. where the brake input first changes from 0.

C2. If the steering input starts before the brake input, the upper bound goes to the first row where the steering value is greater than (+ or – 7)

Step 7: Flash fill the cell color in Column “G” from the row you found in step 2, **up to 5 rows above the row you identified in step 6.**

Step 8: Note the row numbers at both ends of the cell fill range you created. Then copy and paste them into Columns “H” and “I” at the top of the spreadsheet on the left side of their corresponding crash #.

Step 9: Repeat steps 1-8 for each crash. If there are not 27 repeated Column headers, ask Wade.

Step 10: Reupload file to shared drive rename it like this “particpant1CLEAN”.

Assignments

- **Wade: 1-6**
- **Daniel: 7-10**
- **Mary: 11-14**
- **Rohan: 15-18**
- **Rachel: 19-22**
- **Sarah: 23-26**
- **Tanner: 27-30**

Step 6: Scroll up from Row you found in step 2.

A. 1st you are looking for if the TTC started the alert, before the participant took control. Find the first row where the TTC value was 1.95 or less. This row will be the upper bound. If there is no ttc value in this range. Go to B.

B. You are looking for the row where the first control input (brake or steering) that was made, where speed decreased to under 17.00. Then move to C1 or C2.

C1. If the brake input starts before steering (+ or – 7), then the upper bound goes to the row above the row you found in B. where the brake input first changes from 0.

C2. If the steering input starts before the brake input, the the upper bound goes to the first row where the steering value is greater than (+ or – 7)