CONFIDENTIAL - FOR PEER-REVIEW ONLY

AV Culpability Label Clustering (#178132)

Created: 06/05/2024 07:25 AM (PT)

1) Have any data been collected for this study already?
No, no data have been collected for this study yet.

2) What's the main question being asked or hypothesis being tested in this study?
In this study, we measure the capability perception of different marketing labels of autonomous vehicles by providing participants with common marketing labels and the names of different SAE levels. We explore, in a data-driven way, how these labels naturally cluster based on perceptions of their automation levels.

3) Describe the key dependent variable(s) specifying how they will be measured.
The dependent variable is the perception of automation level of the vehicle, which is measured on a scale of 1-6, which is based on the SAE levels of different levels of automation of autonomous vehicles. Participants are provided with a table describing the different SAE levels and their associated capabilities.

4) How many and which conditions will participants be assigned to?
There is only one condition in this experiment.
Participants will be provided with 25 labels in randomized order on a single page, including: Copilot, Mobility Teammate Concept, Super Cruise, Sensing Elite, ProPilot, SmartSense, Drive Wise, Active Driving Assist, Eyesight Driver, XPilot, LaneSense, Autopilot, IQ.Drive, DriverPilot, Full Self-Driving, Ride Pilot, Safety System+, AcuraWatch, Pre Sense, Apollo, Driver Assistance, Highway Pilot, Conditional Automation, High Automation, and Full Automation.
Participants to rate each label on an automation scale from 1-6.

5) Specify exactly which analyses you will conduct to examine the main question/hypothesis.
We will calculate the average of the perception capabilities of each of the marketing labels. We will then use a hierarchical clustering method to cluster the marketing labels.
The reason we are conducting this analysis, is so that we can pick any one label from each main cluster to compare in subsequent studies.

6) Describe exactly how outliers will be defined and handled, and your precise rule(s) for excluding observations.
We will exclude participants who fail any 1 of our 2 comprehension check questions incorrectly.

7) How many observations will be collected or what will determine sample size? No need to justify decision, but be precise about exactly how the number will be determined.
We will collect responses from 100 participants.

8) Anything else you would like to pre-register? (e.g., secondary analyses, variables collected for exploratory purposes, unusual analyses planned?)
Only participants who pass two attention checks at the beginning of the survey will be eligible. We will include some demographic questions but nothing identifiable (age, gender, whether they have a drivers' license). We will also ask participants how familiar they are with AVs on a 100-point scale with endpoints, 0- Very little and 100- A lot.