AIMislabeling_E16_TeslaOwners (#199596)

Author(s)
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Pre-registered on: 11/15/2024 11:00 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 a previous study, we discovered that the marketing labels used for autonomous vehicles (AVs), specifically 'Autopilot' versus 'Copilot,' significantly influence the perceived level of automation. 'Autopilot' was associated with a higher level of perceived automation, which in turn led to increased ascriptions of liability and responsibility for both the firm and the AV in the event of an accident.
In this study, we aim to investigate whether Tesla owners can accurately identify Autopilot's actual level of automation. We hypothesize that, on average, Tesla owners will perceive the level of automation to be higher than its true classification.

3) Describe the key dependent variable(s) specifying how they will be measured.
The main dependent variables in this study are as follows:
1. Perceived level of automation for Tesla's Autopilot: Measured on a 6-point scale, where 1 = "No Automation" and 6 = "Full Automation."
For question (1), participants are explicitly instructed not to search for information about the level of automation of Tesla's Autopilot. They are asked to respond solely based on their personal experience with and impression of Autopilot.

4) How many and which conditions will participants be assigned to?
All participants will be assigned to the same condition.

5) Specify exactly which analyses you will conduct to examine the main question/hypothesis.
We will perform a t-test on the perceived level of automation, testing against the null hypothesis that the level of automation is equal to 2.

6) Describe exactly how outliers will be defined and handled, and your precise rule(s) for excluding observations.
We will exclude participants who answer any one of the two 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 apply a Pre-Registered Interim Analysis Design (PRIAD), specifically utilizing the two-stage Pocock design as described by Andre and Reinholtz (2024). Initially, we will gather data from 100 participants. If the measures and mediation effect yield a p-value below 0.0294, we will discontinue further data collection. Otherwise, we will continue to reach a full sample of 200 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 and own a Tesla vehicle will be eligible to participate in this study. We will include some demographic questions but nothing identifiable (age, gender). We will also ask participants how familiar they are with AV on a 100-point scale with endpoints, 0- Very little and 100- A lot.
We also explore whether certain factors-including prior experience with Autopilot, being the primary driver, and having personally purchased the vehicle-affect whether people view Autopilot as more or less automated.