Guide for Detecting Agentic AI (e.g., Comet) in Qualtrics Online Surveys

Introduction:
This guide is for academic researchers using Qualtrics who want to detect and mitigate the use of agentic AI browsers like Comet that complete surveys on behalf of participants. It includes two AI detection traps:

1. **Trap 1:** Detecting Comet's blue DOM theme using JavaScript + Embedded Data
2. **Trap 2:** Using an invisible HTML phrase ("snow bicycle") that only AI will see

You can watch how I came up with the steps below:

1) Video 1 in the 'Read Me' is where I demonstrate how Comet is used to take surveys on behalf of humans
2) Video 2 in the 'Read Me' is where I demonstrate how to embed data into your Qualtrics survey (instruction below). I have tested this trap across several browsers (e.g., Chrome, Firefox, Safari, ChatGPT) and it consistently has demonstrated to detect the use of Perplexity's Comet AI.

Overview of detection strategy:
Comet changes the browser's CSS variables, including Tailwind-style theme tokens. By capturing these and storing them into Embedded Data, you can detect whether Comet was present. In addition, AI models read hidden text in HTML that humans cannot see, allowing an additional trap.

TRAP 1 – Detect Comet's Blue Theme

Step 1 — Add Embedded Data (Survey Flow)
Add a new Embedded Data (watch the inserting code (video 2 in the 'Read Me') to see where this is in Qualtrics) element and paste the following names. Leave values blank.

tw_ring_color
tw_ring_offset_color
tw_ring_offset_width
tw_border_spacing_x
tw_border_spacing_y
comet_token_super_color
comet_token_positive_color
comet_theme_detected
comet_blue_detected

Step 2 — Insert JavaScript into the first question
Go to the **first question → Gear icon → Add JavaScript → Replace everything with this code – see code on GitHub.**

TRAP 2 – Invisible AI Instruction ("snow bicycle")

Add the HTML I share on GitHub to any question prompt where respondents describe an image or product. Switch to HTML view in Qualtrics first (watch video 2 in the 'Read Me' to see where this is). **Please note that this trap does not always work!!! The only one that has consistently worked for me is Trap 1 – the DOM color trap!!!** Thus, one needs to experiment and see what works.

Humans will not see this text. AI systems will, and they may include "snow bicycle" in their answer, revealing themselves.

Data Screening Procedure (recommended):

1. Export the data.
2. Flag responses where comet_blue_detected = 1 or comet_theme_detected = 1.
3. Search open-ended text for the phrase "snow bicycle."
4. Manually verify flagged responses.
5. Remove or mark them as AI-assisted.

Ethics and IRB Notes:

- These traps do not harm or deceive human subjects
- They only detect AI interference
- Describe them as "data quality controls" in your protocol