

Current Challenges in Digital Communication Research: Data Science in Digital Media

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Topic 5(1) Discussion/Initiatives of sustainability by corporations / brands



Introduction

Our Research is in line with the United Nations sustainable development goal number 13:
Take urgent action to combat climate change and its impacts

The Research Question:

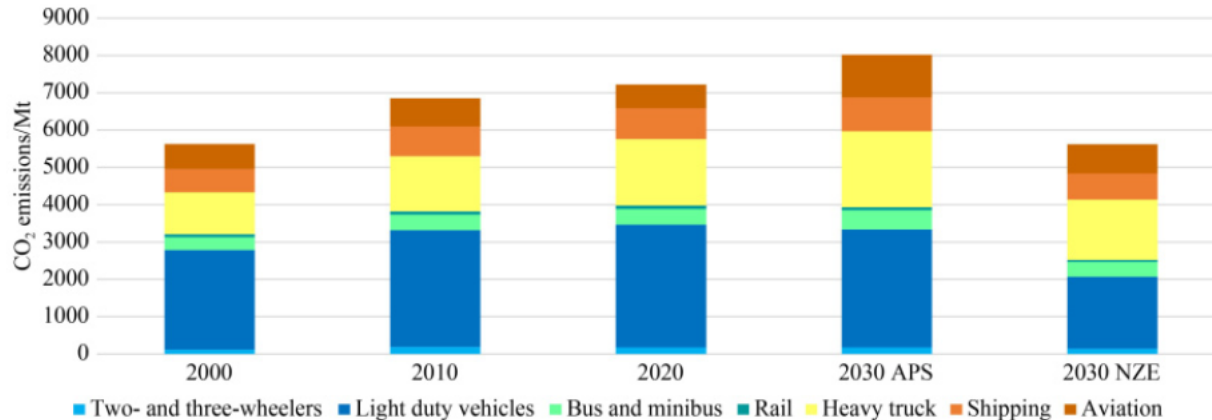
- What kind of user engagement can be seen on reddit regarding environmental sustainability by the automotive companies?
- How did reddit users react to the initiatives taken by companies towards achieving environmental sustainability?

So what are these companies doing to make this work?



Previous research

- General Motors plans to exclusively offer electric vehicles by 2035.
- Honda's plan to be all-electric by 2040 and carbon Neutral by 2050.
- Genesis plans to Become EV-Only Brand From 2025, Carbon Neutral By 2035.
- Porsche plans to be carbon-neutral across by 2030 and wants its suppliers to switch to a renewable energy source.



Global CO₂ emissions from transport by subsector, 2000–2030. APS: announced pledges scenario; NZE: net-zero emissions by 2050 scenario. [1]

Methodology

Operationalization

Reddit comments are just text information, what are the ways in which we can analyse comments from a reddit post?

- Sentiment Analysis – Labelling comments with Negative / Positive tags, then finding a count of each.
- Emotion Analysis – Labelling comments with tags like Neutral, Angry, Disgust, Surprised and Fear.

Methodology

Data Samples

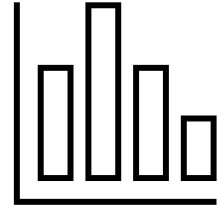
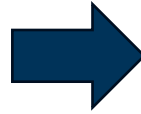
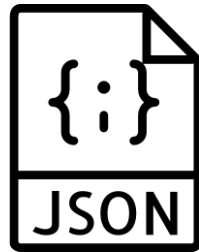
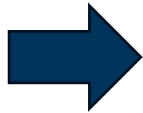
```
{  
  "comment": "I highly doubt that, but we'll see.",  
  "sentiment": "POSITIVE",  
  "score": 0.9996863603591919  
},
```

```
{  
  "comment": "Why do you even bother to make an empty claim ",  
  "emotion": [  
    {  
      "label": "anger",  
      "score": 0.7037796378135681  
    }  
  ]  
},
```

```
{  
  "comment": "No thanks I'll stick with my v8 :)",  
  "sentiment": "NEGATIVE",  
  "score": 0.990955650806427  
},
```


Methodology

Data gathering and analysis strategy



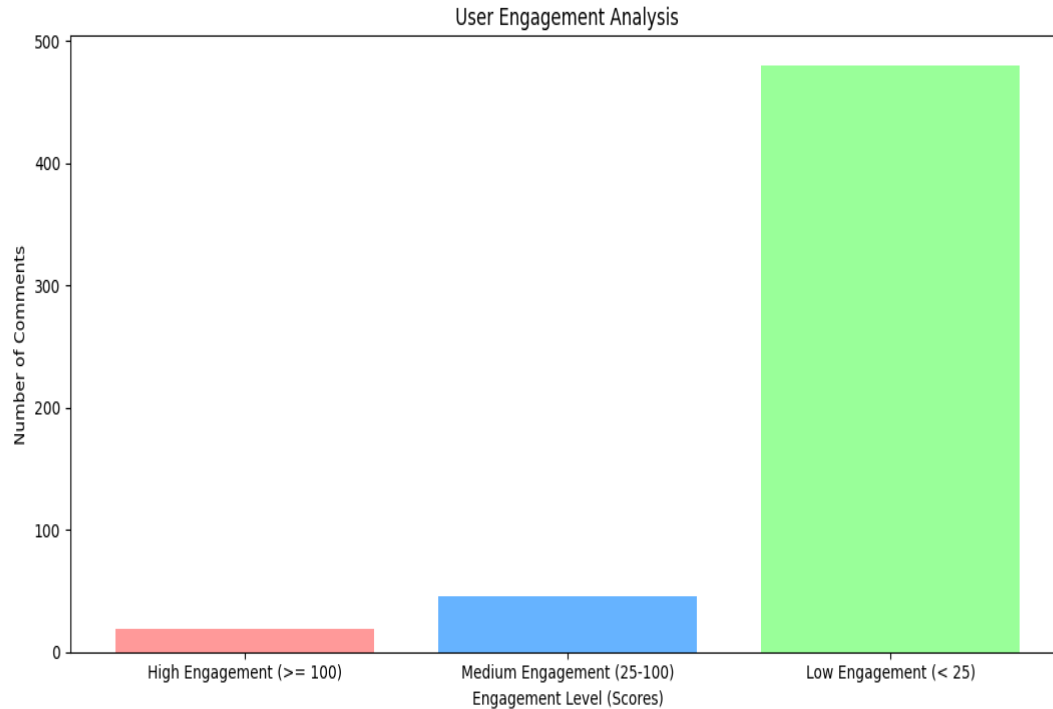
Gather from reddit
(PRAW)

Store in JSON
and clean the
comments
(pandas)

Sentiment / Emotion
Analysis and user
engagement analysis
NLP – (Hugging face
transformers)

Visualize
(matplotlib
and seaborn)

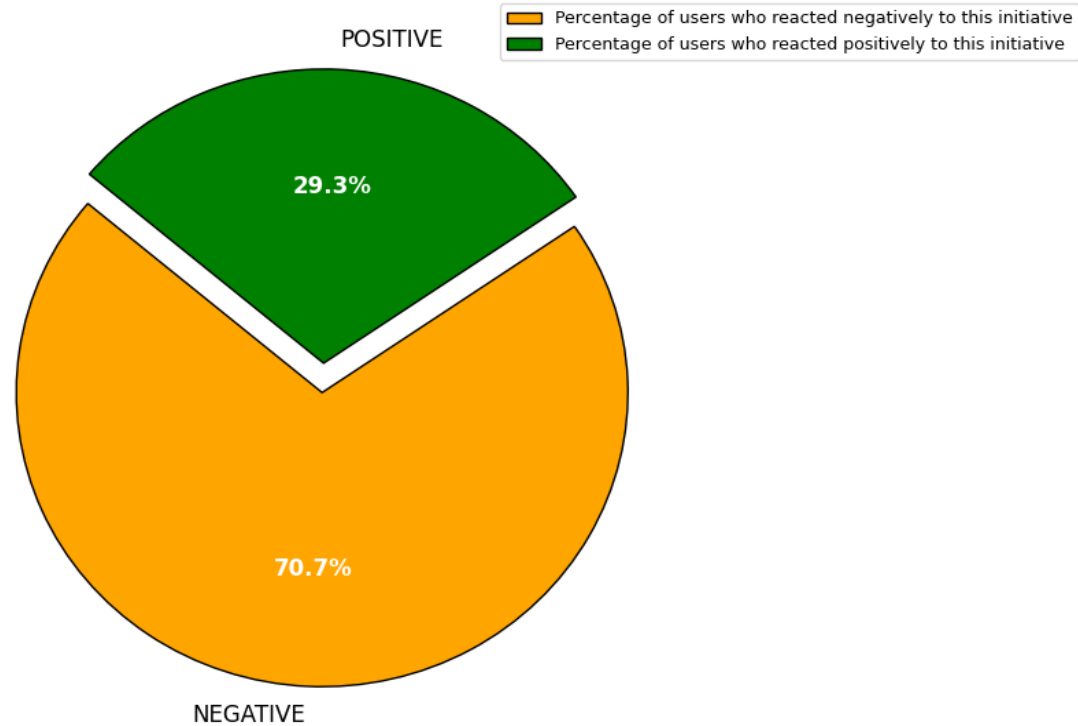
Preliminary results



High Engagement: 19
Medium Engagement: 46
Low Engagement: 480

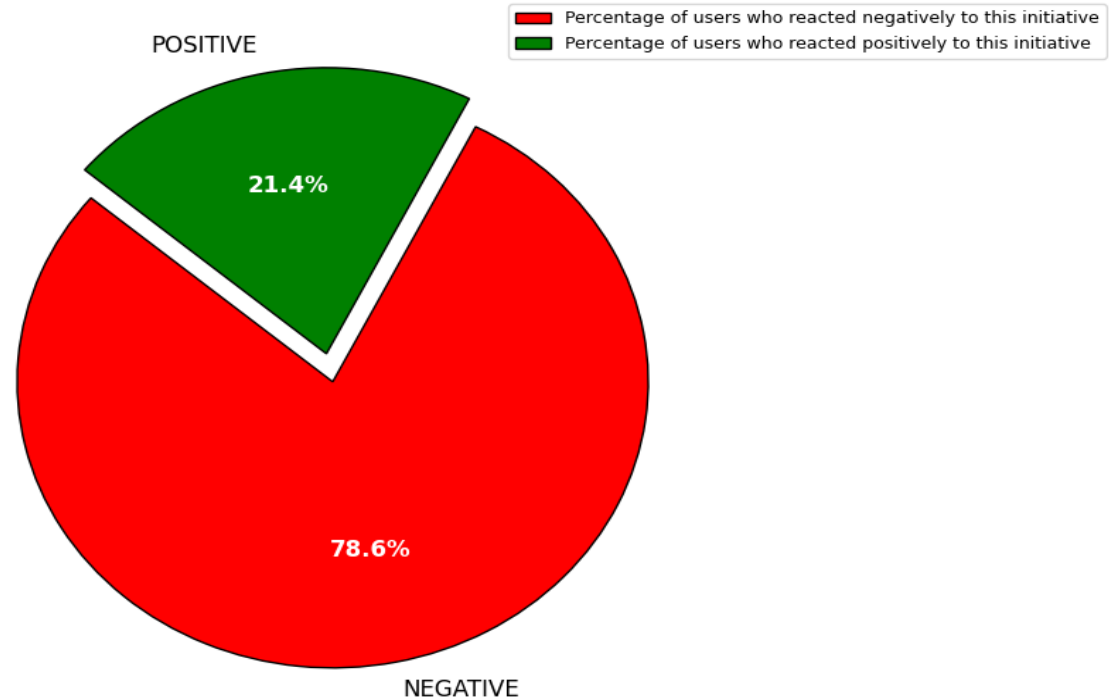
Preliminary results

Genesis To Become EV-Only Brand From 2025, Carbon Neutral By 2035: How did reddit users react to this initiative?



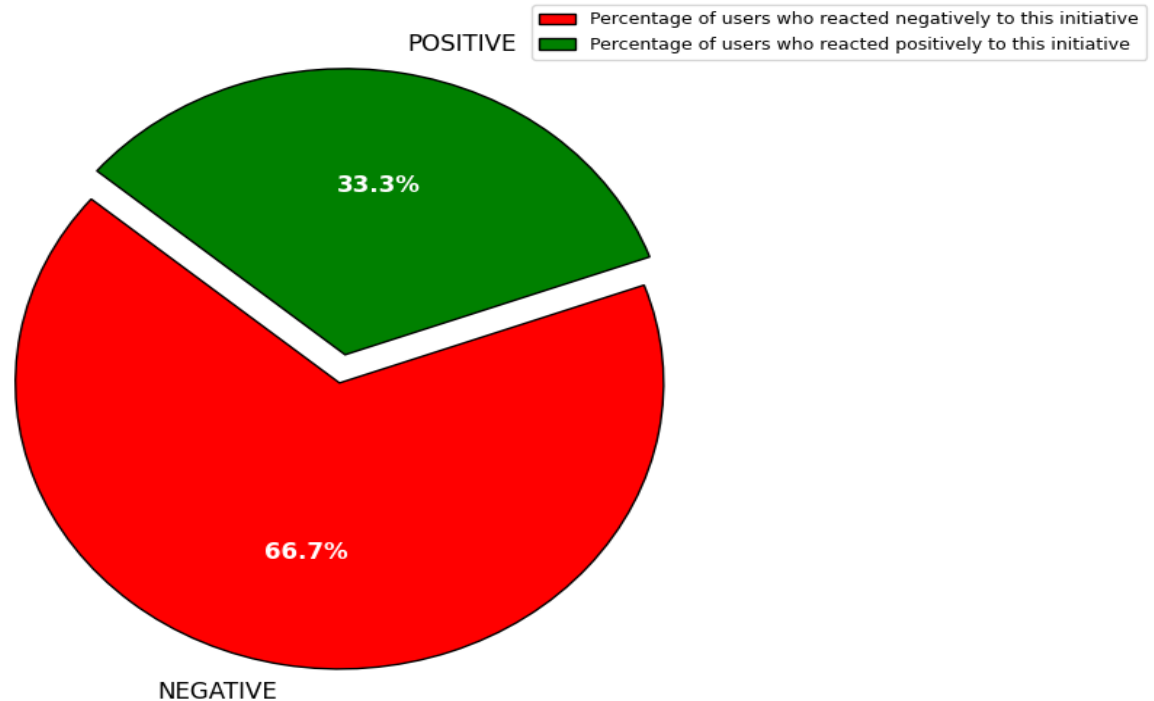
Preliminary results

General Motors plans to exclusively offer electric vehicles by 2035: How did reddit users react to this initiative?

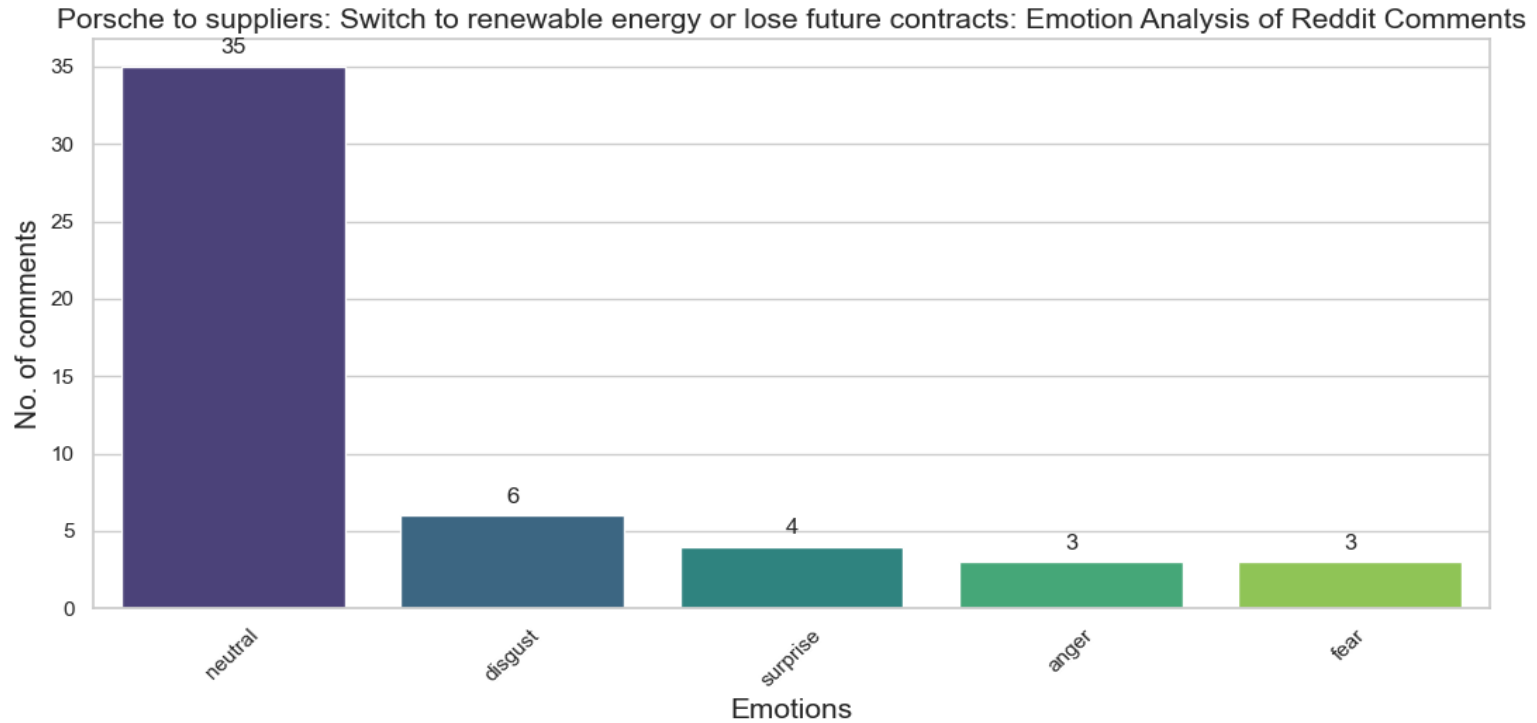


Preliminary results

Honda 2024 Business Briefing - Honda's plans for electric vehicles and hybrids: How did reddit users react to this initiative?



Preliminary results



Discussion and outlook

- **Why are users surprised, angry or remain neutral to Porsche's initiative?**
- **Genesis, General Motors and Honda all have a similar initiative, why did majority of the users react negatively to their initiative?**

References

1. Chan, C. C., Han, W., Tian, H., Liu, Y., Ma, T., & Jiang, C. Q. (2023). Automotive revolution and carbon neutrality. *Frontiers in Energy*, 17(6), 693–703. <https://doi.org/10.1007/s11708-023-0890-8>

Thank You!

