



As the world grapples with unprecedented environmental crises and political instability, the role of media narratives has never been more critical. The January 2025 L.A. Fires, a devastating event that ignited widespread concern over climate change and public safety, serve as a pivotal case study. This research investigates how major newspapers and social media platforms framed the fires, revealing the dominant themes in climate and political discourse. By analyzing these narratives, we aim to uncover how media coverage shapes public understanding and influences policy decisions in the face of climate emergencies.

To investigate the rise of misinformation around climate change and broader trends in **scientific denialism**. With headlines increasingly shaped by political agendas, conspiracy theories, and media polarization, it's critical to understand how false or misleading narratives take hold—especially during disasters like wildfires. This research will explore how misinformation spreads, who it targets, and how it undermines trust in science and public institutions.

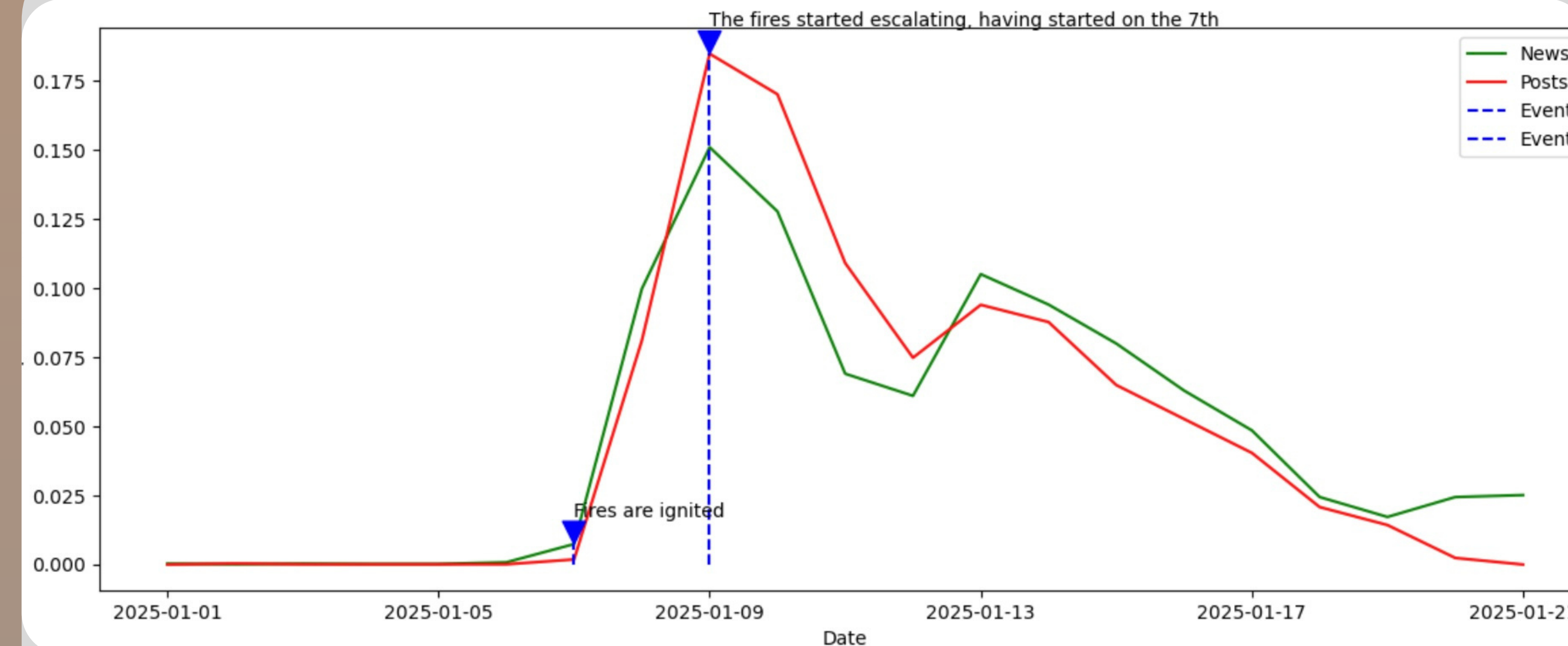
To understand media framing and misinformation trends around climate change, I collected and analyzed data from two key sources between **January 1-23, 2025**:

- Source: News stories were scraped using Media Cloud, exported as Excel files.
- Processing: Headlines were analyzed in Python (Pandas) to clean and organize the data.
- Topic Extraction: Headlines and hashtags were run through ChatGPT to extract and rank the top 10 themes.
- Visualization: Created word clouds to visualize the most frequent language used in climate-related coverage.

- Source: Facebook posts during the same time frame were scraped for content and metadata.
- Categorization: Posts were tagged as either climate-related or non-climate, and poster types (e.g., individuals, pages, verified accounts) were identified.
- Analysis:
 - Built a time series to compare post volume with news coverage.
 - Generated a network visualization of hashtag co-occurrence to highlight connections and misinformation clusters.

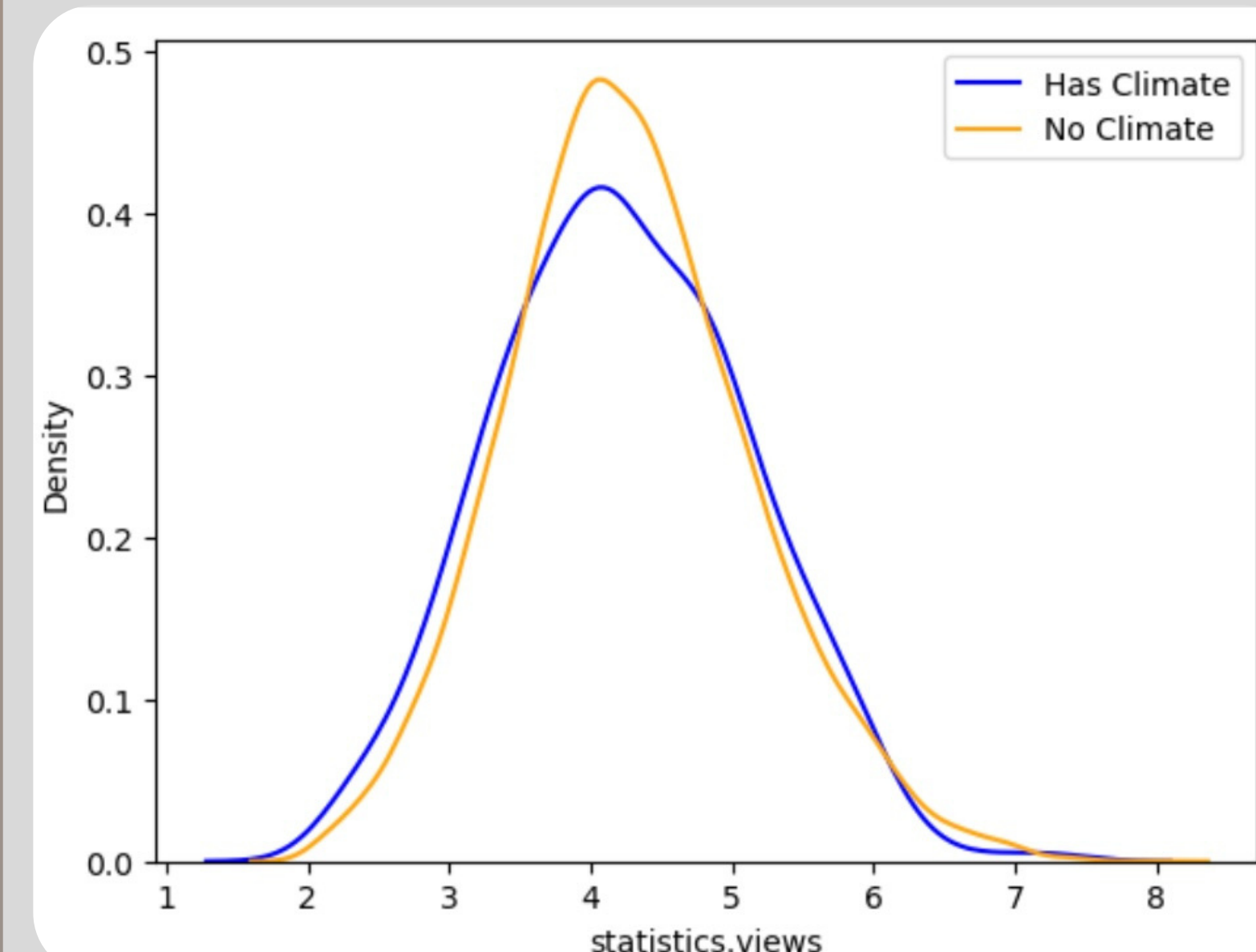
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DISSECTING CLIMATE VISIBILITY AND ENGAGEMENT IN THE MIDST OF DISASTER

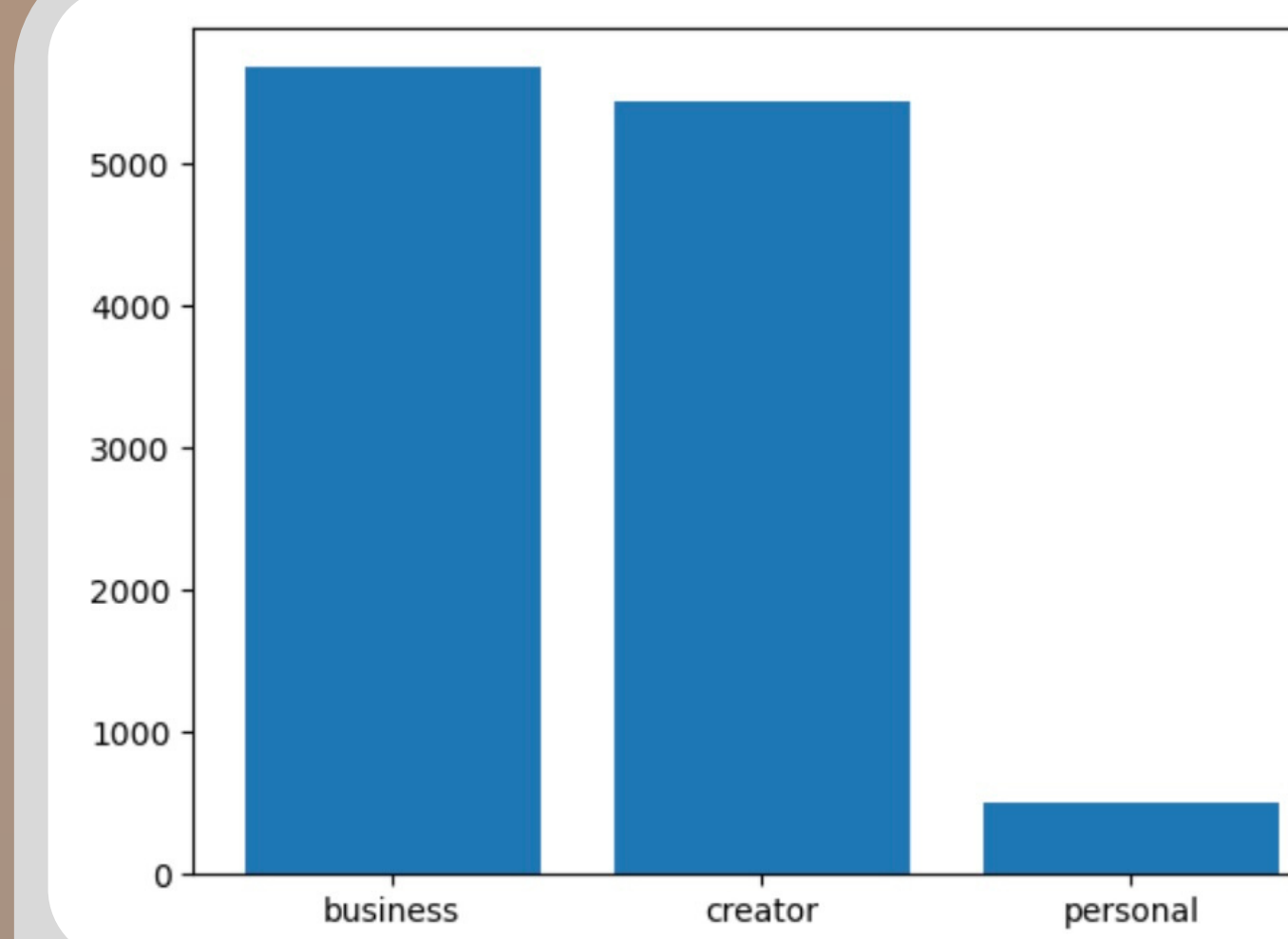


i. An overlaid *time series* of the posts and newspapers. We see both of them spiking at the beginning of the wildfires, with social media posts having a larger volume but experiencing a steeper disengagement rate

1. SOCIAL MEDIA POSTS



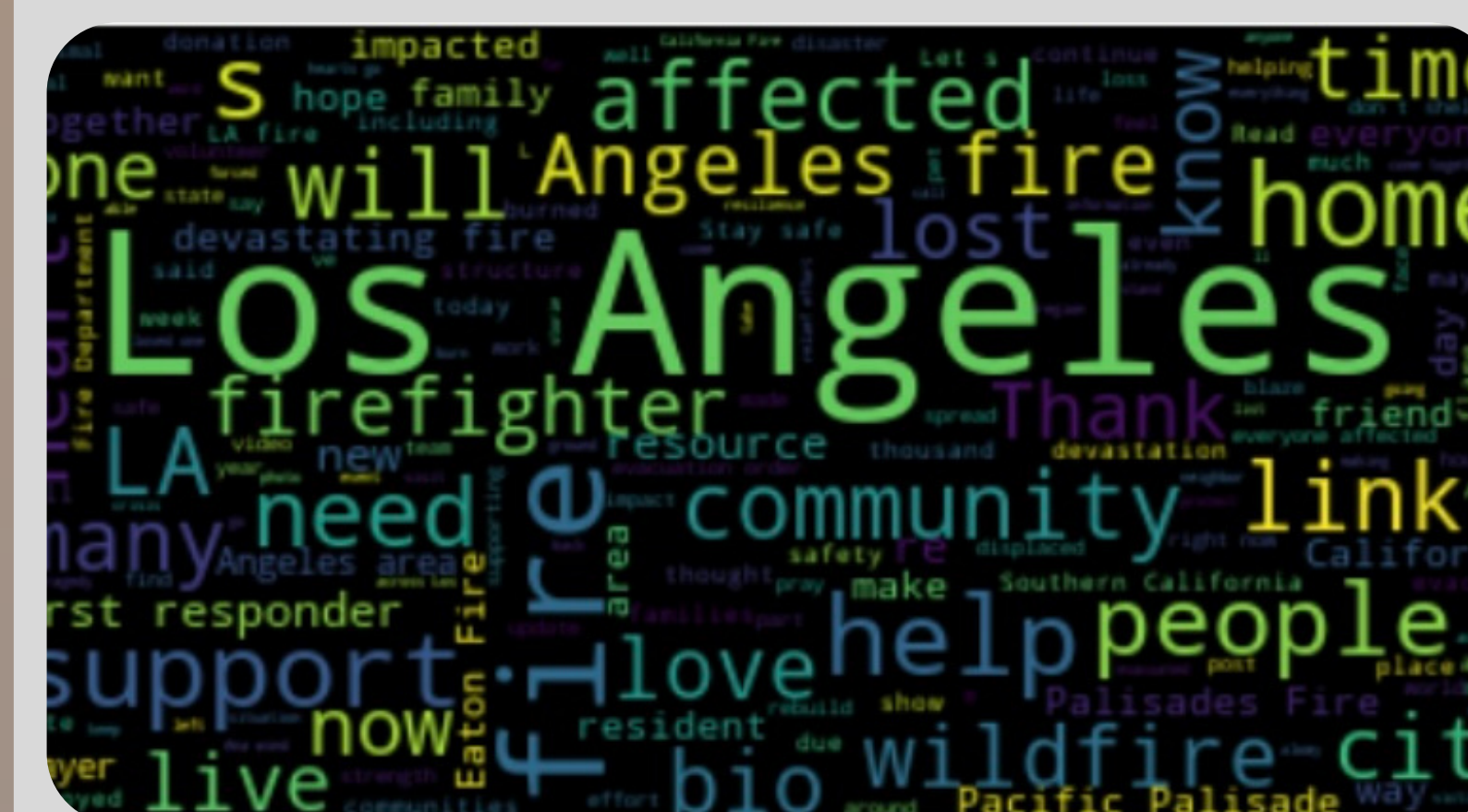
i.i This *density plot* compares view counts for Facebook posts with and without climate-related terms. Both peak similarly, but climate posts tend to get slightly fewer views, suggesting lower overall engagement.



iii. This *bar chart* shows that business and creator accounts post the most climate content, while personal accounts contribute very little, highlighting the dominance of institutional voices.

iv. Network Visualization (live demo)

2. NEWS



v. This *word cloud* highlights the most frequently used words in the Facebook posts. The prominent terms show that user discourse focused heavily on emotional response, and calls for aid. The language is centered around solidarity, urgency, and community.

vi. Top 10 news headings from ChatGPT

1. California Wildfires & Climate Change
2. Current Administration Policies and Actions
3. Climate Change Impacts and Scientific Studies
4. Energy and Environmental Policy
5. Political Conflict and Polarization
6. Disaster Preparedness, Response, and Infrastructure
7. Social and Community Impacts
8. Global Climate Diplomacy and Finance
9. Misinformation and Media Narratives
10. Scientific and Technological Advances

CONCLUSIONS

By analyzing the above results, it is revealed how digital and traditional media shaped public discourse, elevated certain narratives, and contributed to ongoing challenges in climate communication. The key takeaways were:

1. **Media Dynamics & Reactive Coverage:** Social media posts attract more views during crisis peaks, but traditional news outlets maintain a longer-lasting influence on public understanding. However, both their sharp decreases reflect struggles to maintain focus on long-term climate issues.
2. **Institutional Dominance:** Business and creator accounts dominate climate-related content during wildfire events, while personal accounts are underrepresented, indicating a top-down narrative structure.
3. **Misinformation Spread:** The rise of social media has facilitated the spread of wildfire-related misinformation and climate denialism, with peaks in content volume aligning with conspiracy theories.
4. **Engagement Challenges:** Climate-related posts generally receive fewer views than non-climate posts, suggesting difficulties in climate communication, possibly due to audience desensitization or algorithmic deprioritization.
5. **Climate Change and Intersectionality :** The top newspaper headlines show recurring themes of policy, science, misinformation, preparedness, and community impact—highlighting that wildfires are no longer just environmental disasters but are deeply embedded in political, social, and technological contexts.

RELATED LITERATURE

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