

UT Austin Research Proposal

<https://css.jima.me/>

Detecting Bias and Misinformation in News Using Computational Approaches

Purpose:

This research project aims to deliver actionable insights that enable Perigon to detect bias and misinformation in news. By employing computational methods and leveraging Perigon's API, the project seeks to enhance the reliability and transparency of news content while driving future product innovation.

Research Focus:

- **Detecting Bias Through Language:** What specific linguistic patterns, such as word choice, framing, or tone, signal bias in news articles?
- **Identifying Key Facts:** This research focuses on Perigon's Stories Endpoint, which clusters related articles based on similar events or topics. The researcher will analyze key facts within clusters to detect discrepancies and highlight variations.
 - How can key facts be identified, and how do they vary across sources reporting the same story?
 - What methods can uncover and quantify differences in the reporting of key facts within story clusters?
- **Misinformation Detection:** What characteristics of a news article can signal misinformation or opinionated reporting?
 - What features or patterns can reliably differentiate between objective and subjective content?

Goals:

The research will act to generate informed and actionable insights in order to identify:

- **Bias in News:** Patterns and markers indicating bias in language, tone, and framing.
 - Identify linguistic patterns and source history to detect bias.
- **Misinformation in News:** Signals that differentiate factual content from misleading or false narratives.
 - Distinguish factual reporting from opinion-based or misleading narratives.
- **Key Fact Discrepancies:** Variations in reporting key facts across sources covering the same event.
 - Uncover discrepancies in key facts across story clusters to highlight variations in reporting.

Outcomes:

This research aims to inform Perigon, enabling us to:

- **Uncover Bias Patterns:** Identify markers for detecting bias in news content, enabling the development of a method to evaluate and quantify bias — such as a bias distribution model.
- **Enhance Key Fact Analysis:** Enable methods to extract and evaluate key facts within story clusters.
- **Detect Misinformation:** Pinpoint and identify misleading or false narratives in news articles.