

PragMaBERT: Analyzing Pragmatic Markers in Politicals

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Introduction

This project introduces a novel dataset, model, and analytical framework aimed at identifying and evaluating the use of Pragmatic Markers (PrMs) in political discourse, focusing on markers used manipulatively. Utilizing a fine-tuned BERT model, our approach enhances the understanding of PrMs' use in political contexts and provides a foundation for understanding manipulative language in politics.

Background

Pragmatic Markers (PrMs) are:

- An essential part of dialogue
- Heavily context dependent
- Used for a wide variety of grammatical functions
- Demonstrated to have manipulative potential in politics, elsewhere

Our work applies NLP techniques to better understand the adoption of PrMs in political speeches. We focus on "hedge" and "authority" markers.

Data

We created a custom dataset by manually labeling samples from the MediaSum dataset. We label instances so that a finetuned model can learn to distinguish between words functioning as a hedge marker, authority marker, or neither:

Hedge: "I'm not CLEAR whether he actually has any views on...."

Authority: "It was very CLEAR to us from the beginning that these leaders...."

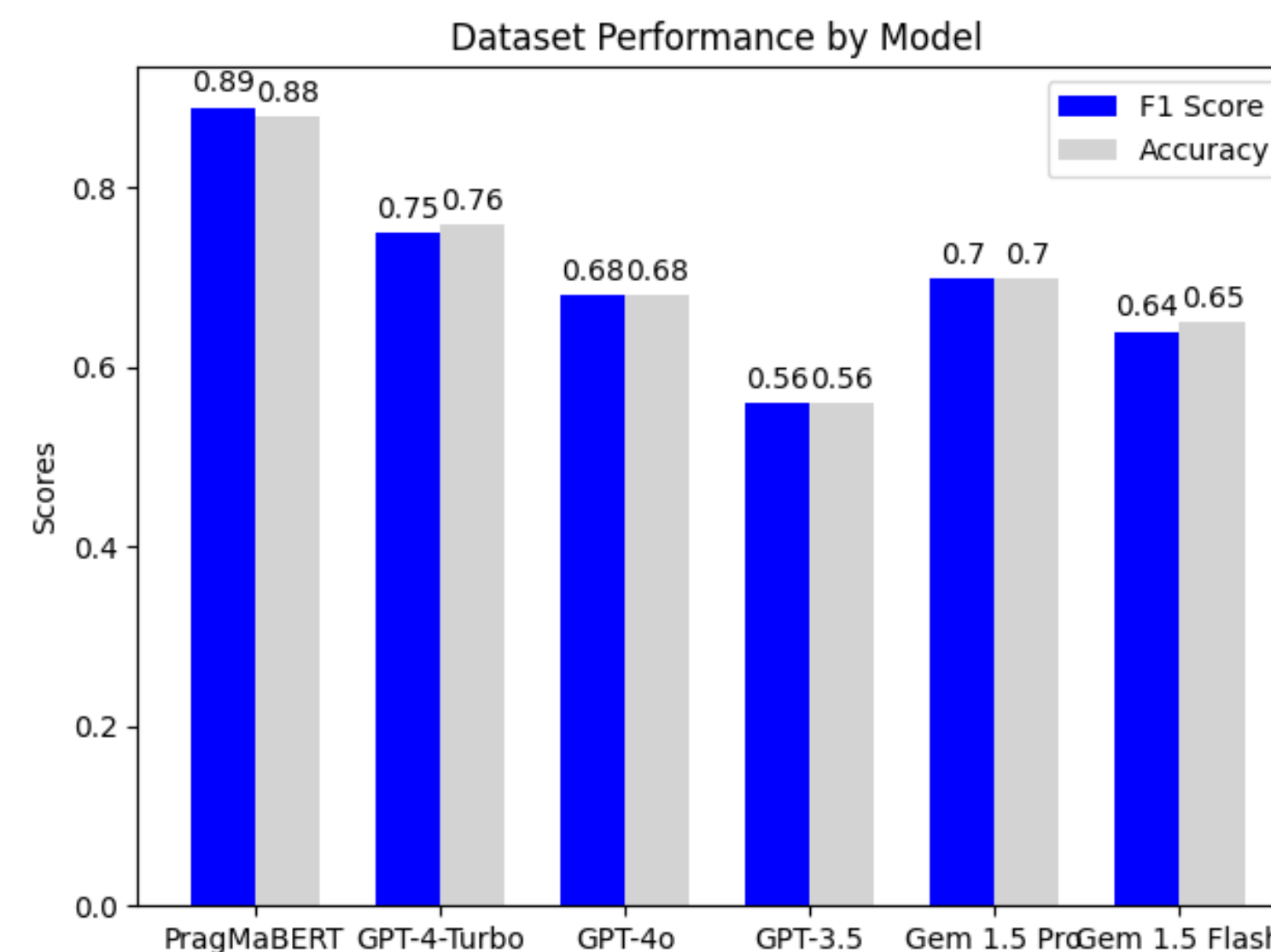
None: "There's been a decline in people who own their own homes free and CLEAR of debt."

Methods

We present PragMaBERT, a modified BERT model trained on a newly created dataset from political speeches, enriched with annotations for PrMs. This model outperforms existing solutions by effectively identifying nuanced uses of PrMs.

Results

Our results significantly outperform SoTA models at correctly identifying examples of hedging and authority markers.

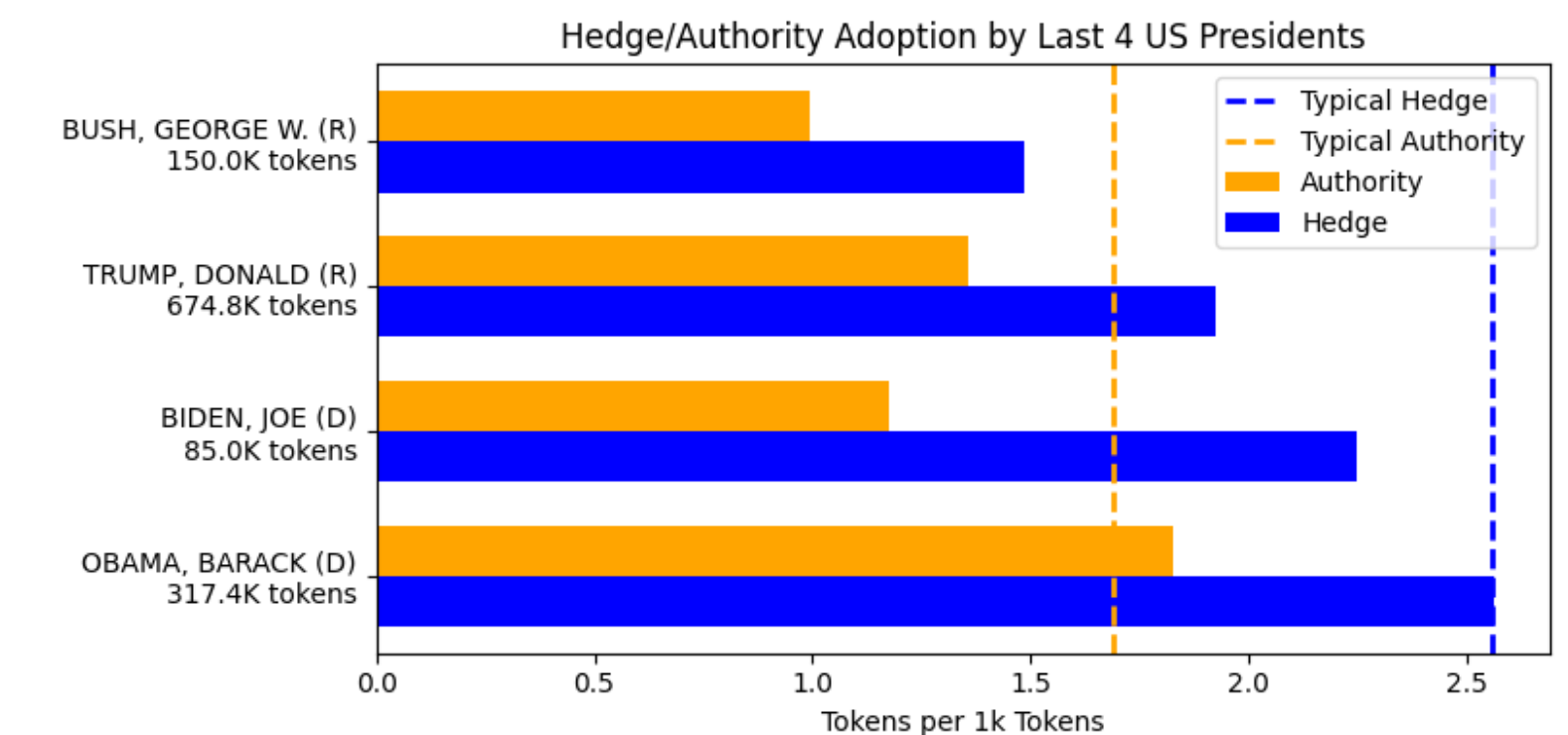


Caveat

PrMs are not conclusive indicators of deceit or manipulation—analysis of these markers should consider the broader conversational context and be part of a set of tools to analyze political manipulation. Their presence alone does not confirm manipulative intent. Nonetheless, we believe there are meaningful questions and insights that arise when looking at PrM usage.

Analysis, Discussion Points

Inter-Speaker Variation



Intra-Speaker Variation

It may be telling when speakers deviate from their typical PrM usage

