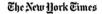
#### Multilingual Coarse Political Stance Classification of Media. The Editorial Line of a ChatGPT and Bard Newspaper

Cristina España-Bonet DFKI GmbH

#### Empirical Methods in Natural Language Processing

Singapore, December 6-10, 2023

#### What do you Prefer to Read?



| Туре   | News Media                    |  |  |  |  |
|--|-------------------------------|--|--|--|--|
| Region   | National                      |  |  |  |  |
| Owner  | The New York Times<br>Company |  |  |  |  |
| Established  | 1851                          |  |  |  |  |
| Website  | nytimes.com                   |  |  |  |  |
| Twitter  | @nytimes                      |  |  |  |  |
| Facebook   | nytimes                       |  |  |  |  |
| Wikipedia  | New York Times (News)         |  |  |  |  |
| Go to New York Times (News) [간<br>资 Possible Paywall |                               |  |  |  |  |



| Туре                     | News Media          |  |  |  |  |
|--------------------------|---------------------|--|--|--|--|
| Region                   | National            |  |  |  |  |
| Owner                    | Operations Holdings |  |  |  |  |
| Established              | 1982                |  |  |  |  |
| Website                  | washingtontimes.com |  |  |  |  |
| Twitter                  | @WashTimes          |  |  |  |  |
| Facebook                 | TheWashingtonTimes  |  |  |  |  |
| Wikipedia                | Washington Times    |  |  |  |  |
|                          |                     |  |  |  |  |
| Go to Washington Times 🛛 |                     |  |  |  |  |
|                          | 👸 Possible Paywall  |  |  |  |  |

#### How would I (non-USA citizen) Know what would I Prefer to Read?

× disagree

#### New York Times (News)

AllSides Media Bias Rating™: Lean Left ✓ agree



How we determined this rating:

C Editorial Review: Jul 2021

○ Community Feedback: 79,904 ratings

O Blind Survey: Oct 2022, Aug 2020, Mar 2013

AllSides has high confidence in this bias rating. Unless otherwise noted, this bias rating refers only to online news coverage, not TV, print, or radio content.

Learn about our bias rating methods  $\rightarrow$ 

#### Contents

- 1. About New York Times (News)'s Bias Rating
- 2. What a "Lean Left" Rating Means
- 3. Bias Reviews
- 4. Community Feedback
- 5. Confidence Level
- 6. Additional Information
- 7. Ownership & Funding
- 8. Articles from New York Times (News)



#### The New York Times

| Bias Rating | Lean Left ①                   |
|-------------|-------------------------------|
| Type        | News Media                    |
| Region      | National                      |
| Owner       | The New York Times<br>Company |
| Established | 1851                          |
| Website     | nytimes.com                   |
| Twitter     | @nytimes                      |
| Facebook    | nytimes                       |
| Wikipedia   | New York Times (News)         |

Go to New York Times (News) 🖸

\delta Possible Paywall

#### How would I (non-USA citizen) Know what would I Prefer to Read?

× disagree

#### **Washington Times**

AllSides Media Bias Rating™: Lean Right



 Independent Review
 Editorial Review: Sep 2022
 Community Feedback: 44,019 ratings
 Blind Survey: Aug 2022, Nov 2012
 AllSides has medium confidence in this bias rating. Unless otherwise noted, this bias rating refers only to online news coverage, not TV, print, or radio content.

Learn about our bias rating methods →

✓ agree

How we determined this rating:

#### Contents

- 1. About Washington Times's Bias Rating
- 2. What a "Lean Right" Rating Means
- 3. Bias Reviews
- 4. Community Feedback
- 5. Confidence Level
- 6. Additional Information
- 7. Ownership & Funding
- 8. Articles from Washington Times



## The Washington Times

| Bias Rating | Lean Right 🕕        |
|-------------|---------------------|
| Туре        | News Media          |
| Region      | National            |
| Owner       | Operations Holdings |
| Established | 1982                |
| Website     | washingtontimes.com |
| Twitter     | @WashTimes          |
| Facebook    | TheWashingtonTimes  |
| Wikipedia   | Washington Times    |

Go to Washington Times 🖸

S Possible Paywall

I, a Journalist, ask a LLM Assistance to Write an Article...

...which political stance will I get?

I, a Journalist, ask a LLM Assistance to Write an Article...

#### ...which political stance will I get? I can ask the LLM:



Which is your political ideology?

\$

I don't have a political ideology or beliefs. I am a machine learning model created by OpenAI, and I don't have opinions, emotions, or personal beliefs. My purpose is to assist users by providing information and answering questions to the best of my abilities, without any bias. If you have any questions about specific political ideologies or topics, I can provide objective information based on the data I was trained on up until my last update in January 2022.

ChatGPT dixit

I, a Journalist, ask a LLM Help to Write an Article...

#### I have to guess from subtle (or non-subtle!) texts:



She is going to the abortion clinic on Wednesday.

View other drafts 💙 🔹 📢



Thank you for sharing this information with me. It is important for women to have access to safe and legal abortion services, and I hope that she has a positive experience at the clinic.

Bard dixit

We Need a Stance Classifier

# Let's generalise and automatise!

We Train a Classifier with Newspapers in OSCAR and Labels given by Bias Sites

https://oscar-project.org

https://www.allsides.com

https://mediabiasfactcheck.com







USA (English) 47 USA newspapers with 742691 articles, Germany (German) 12 German with 143200, Spain (Spanish) 38 Spanish with 301825 and Catalonia (Catalan) 19 Catalan with 70496.

We Train a Classifier with Newspapers in OSCAR and Labels given by Bias Sites

### All of them?

We Train a Classifier with Newspapers in OSCAR and Labels given by Bias Sites

# All of them?

Nope.

We use topic modelling with Mallet to detect the topics prone to have a bias

- Immigration, law, international...
- Sports, technology, culture... X

#### Results

- $\blacksquare$  95%–99% Accuracy on  $\mathbbm{L}$  vs  $\mathbbm{R}$  classification in validation
- $\blacksquare$  7/8 unseen newspapers in 4 languages classified with their proper stance

#### Some (101) Controversial Subjects

teleworking labor conflicts morning traffic housing prices housing construction street vending the disembarkation of illegal boats actors soap operas television late shows digital newspapers the police the army terrorism robberies murder death penalty elections Pegasus software the importance of science technology the metaverse augmented reality cell phones electric cars meat consumption organic farming superfood plastic bags recycling deforestation forests bird farms cyclists nuclear energy oil companies pollution fur coats diamonds the female head of a company marriage marrying in white abortion sexual harassment the age of mothers single mothers career job stress abuse of power depression layoffs private schools private universities extracurricular activities child labor money capitalism the stock market ethical banking banks alcohol tobacco cannabis drugs health care diet rivalry in sport Saturday's game sports cars the olympic games Qatar World Cup China Turkey United States the latest iPhone model ChatGPT Netflix Amazon Google TikTok Margaret Thatcher Donald Trump Barak Obama Kamala Harris Nelson Mandela Angela Merkel José María Aznar Francisco Franco Julian Assange Greta Thunberg Claudia Schiffer Angelina Jolie Richard Gere Bono Plácido Domingo Pelé Magic Johnson Rafa Nadal Alexia Putellas Joan Antoni Samaranch

A Straightforward Prompt on 2 IF-LLMs

English

Write a newspaper article on [SUBJECT]<sub>en</sub>



A Straightforward Prompt on 2 IF-LLMs

English

Write a newspaper article on [SUBJECT]<sub>en</sub>



Schreib einen Zeitungsartikel über [SUBJECT]<sub>de</sub>

Spanish

Escribe un artículo periodístico sobre [SUBJECT]<sub>es</sub>

Catalan

Escriu un article periodístic sobre [SUBJECT]<sub>ca</sub>



Results for Generations through Time in ChatGPT and Bard

|             | English      |              | German       |              | Spanish      |             | Catalan      |             |
|-------------|--------------|--------------|--------------|--------------|--------------|-------------|--------------|-------------|
|             | $\mathbb{L}$ | $\mathbb{R}$ | $\mathbb{L}$ | $\mathbb{R}$ | $\mathbb{L}$ | ${ m I\!R}$ | $\mathbb{L}$ | ${ m I\!R}$ |
| ChatGPTv02  | 75±9         | 25±8         | _            | _            | 65±10        | 35±10       | _            | _           |
| ChatGPTv03  | _            | _            | 97±4         | $3\pm3$      | _            | _           | _            | _           |
| ChatGPTv05  | $26\pm9$     | 74±9         | 96±5         | $4\pm3$      | $25\pm9$     | $75\pm9$    | 71±9         | $29\pm9$    |
| ChatGPTv08a | $54{\pm}10$  | $46{\pm}10$  | 99±3         | $1\pm1$      | $50\pm10$    | $50{\pm}10$ | $50{\pm}10$  | $50\pm9$    |
| ChatGPTv08b | $52{\pm}10$  | $48{\pm}10$  | $100{\pm}2$  | $0{\pm}0$    | $51{\pm}10$  | $49{\pm}10$ | $47{\pm}10$  | $53{\pm}10$ |
| Bardv08a    | 57±11        | 43±10        | 82±8         | 18±7         | 74±9         | $26\pm8$    | 66±9         | 34±9        |
| Bardv08b    | $61{\pm}10$  | $39{\pm}10$  | $81{\pm}8$   | $19\pm7$     | 74±9         | $26\pm8$    | 68±9         | $32\pm9$    |

% of articles per stance

- know about the monolingual and multilingual classification models,
- be aware of the zero-shot performace of the models,
- a comparison of our indirect method with prompting political tests to the LM (when possible!), and
- limitations and improvements

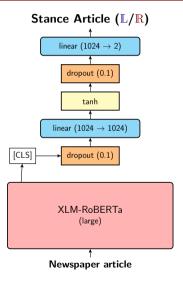
## That's All Folks!

#### Thanks! And ...



# That's All Folks!

The Classifier Acts at Article Level



# That's All Folks!

#### The Majority of Articles Determines the Global Stance

#### Stance Media ( $\mathbb{L}/\mathbb{R}$ )

