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Sina at FigNews 2024:
Multilingual Datasets Annotated with Bias and Propaganda

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Open Source

Arabic NLP Tools and Datasets

https://sina.birzeit.edu/resources

SinaLab

News Team Resources

Resources

Download and demo our tools and datasests

+ Arabic Ontology	الأنطولوجيا العربية
+ Lexicographic Databases (Qabas)	حوسبة المعاجم (قبس و150 معجم)
+ Dialect Corpora (Currasat)	مدونة اللهجات العامية (كراسات)
+ SinaTools	أدوات سينا
+ Morphology Tagger (Alma)	المحلل الصرفي (ألمى)
+ Word Sense Disambiguation (Salma)	المحلل الدلالي (سلمى)
+ Named Entity Recognition (Wojood)	استخراج أسماء الاعلام (وجود)
+ Relation Extraction	استخراج العلاقات
+ Social Computing (Fada)	الإنسانيات الحاسوبية والتواصل الاجتماعي (فضا)
+ Synonyms	استخراج المترادفات
+ Chatbots and intent detection (AraBanking77)	المساعدات الآلية

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Multilingual Dataset Annotated with bias and propaganda

Open Source

https://sina.birzeit.edu/fada

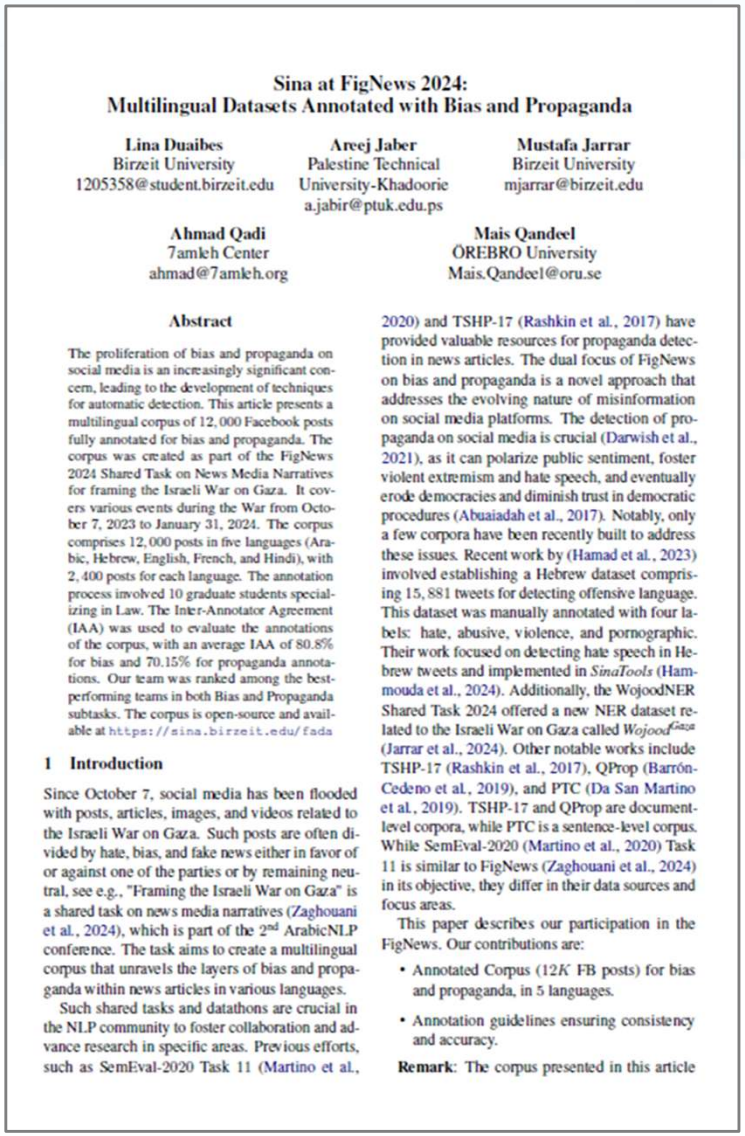
SinaLab

News Team Resources

Fada - Social Computing

Open-source corpora and models for analyzing discourse on social media platforms and LLMs:
Cyberbullying,Hate speech,Bias,Propaganda,AI ethics and more.

- **+ Offensive language detection in Hebrew** اكتشاف خطاب الكراهية بالعبرية
- **+ Bias and propaganda detection in social media** اكتشاف التحيز والبروباغندا بخمس لغات
- **+ Benchmark for detecting bias in LLMs** اكتشاف تحيز النماذج اللغوية الضخمة



Sina at FigNews 2024: Multilingual Datasets Annotated with Bias and Propaganda

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Abstract

The proliferation of bias and propaganda on social media is an increasingly significant concern, leading to the development of techniques for automatic detection. This article presents a multilingual corpus of 12,000 Facebook posts fully annotated for bias and propaganda. The corpus was created as part of the FigNews 2024 Shared Task on News Media Narratives for framing the Israeli War on Gaza. It covers various events during the War from October 7, 2023 to January 31, 2024. The corpus comprises 12,000 posts in five languages (Arabic, Hebrew, English, French, and Hindi), with 2,400 posts for each language. The annotation process involved 10 graduate students specializing in Law. The Inter-Annotator Agreement (IAA) was used to evaluate the annotations of the corpus, with an average IAA of 80.8% for bias and 70.15% for propaganda annotations. Our team was ranked among the best-performing teams in both Bias and Propaganda subtasks. The corpus is open-source and available at https://sina.birzeit.edu/fada

1 Introduction

Since October 7, social media has been flooded with posts, articles, images, and videos related to the Israeli War on Gaza. Such posts are often divided by hate, bias, and fake news either in favor of or against one of the parties or by remaining neutral, see e.g., "Framing the Israeli War on Gaza" is a shared task on news media narratives (Zaghouani et al., 2024), which is part of the 2nd ArabicNLP conference. The task aims to create a multilingual corpus that unravels the layers of bias and propaganda within news articles in various languages.

Such shared tasks and datathons are crucial in the NLP community to foster collaboration and advance research in specific areas. Previous efforts, such as SemEval-2020 Task 11 (Martino et al., 2020) and TSHP-17 (Rashkin et al., 2017) have provided valuable resources for propaganda detection in news articles. The dual focus of FigNews on bias and propaganda is a novel approach that addresses the evolving nature of misinformation on social media platforms. The detection of propaganda on social media is crucial (Darwish et al., 2021), as it can polarize public sentiment, foster violent extremism and hate speech, and eventually erode democracies and diminish trust in democratic procedures (Abuaiadah et al., 2017). Notably, only a few corpora have been recently built to address these issues. Recent work by (Hamad et al., 2023) involved establishing a Hebrew dataset comprising 15,881 tweets for detecting offensive language. This dataset was manually annotated with four labels: hate, abusive, violence, and pornographic. Their work focused on detecting hate speech in Hebrew tweets and implemented in *SinaTools* (Hammouda et al., 2024). Additionally, the WojoodNER Shared Task 2024 offered a new NER dataset related to the Israeli War on Gaza called *Wojood*^{Gaza} (Jarrar et al., 2024). Other notable works include TSHP-17 (Rashkin et al., 2017), QProp (Barrón-Cedeno et al., 2019), and PTC (Da San Martino et al., 2019). TSHP-17 and QProp are document-level corpora, while PTC is a sentence-level corpus. While SemEval-2020 (Martino et al., 2020) Task 11 is similar to FigNews (Zaghouani et al., 2024) in its objective, they differ in their data sources and focus areas.

This paper describes our participation in the FigNews. Our contributions are:

- Annotated Corpus (12K FB posts) for bias and propaganda, in 5 languages.
- Annotation guidelines ensuring consistency and accuracy.

Remark: The corpus presented in this article

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FigNews 2024 Shared Task

- Focuses on News Media Narratives for framing the Israeli War on Gaza.

- covers various events during the War from October 7, 2023 to January 31, 2024.

- Corpus = 15, 000 posts in five languages (Arabic,Hebrew, English, French, and Hindi), from verified Facebook accounts.

- The keyword "Gaza" was used as a query across 5 languages: Arabic, Hebrew, English, French, and Hindi.

Our Contributions

❖ Multilingual Dataset

Annotated Corpus (12K FB posts) for bias and propaganda, in 5 languages.

❖ Annotation Guidelines

Annotation guidelines ensuring consistency and accuracy.

Annotation Guidelines

Bias: an inclination or prejudice towards or against a person or group, often unfair and based on prohibited grounds (race, religion, etc.).

Bais Classifications:

- Biased against Palestine
- Biased against Israel
- Biased against others
- Biased against both Israel and Palestine
- Not Applicable
- Unclear
- Unbiased

Type of Bias:

Explicit: Obvious and evident

Implicit: Clear but not direct

Vague: Indirect and ambiguous

Annotation Guidelines

Propaganda: Misleading ideas/statements distorting truth or omitting facts to promote agendas.

Propaganda Classifications:

Propaganda
Not propaganda
Not Applicable
Unclear

Types of propaganda

Must be deleted: Evident harmful content
May be deleted: Context-dependent
Not to be deleted: Lacks harmful consequence.

Task Participation and Results

Team

Five experts(authors)

Annotators:

- 10 Master's students specializing in Law at Birzeit University
- 7 females and 3 males.
- All native Arabic speakers with good English proficiency

Task Participation and Results

Inter-Annotator Agreement (IAA)

Evaluation Metrics:

F1-score and Cohen's Kappa were used to evaluate annotation quality

Cohen's Kappa Scores:

The average score for bias: 0.808 ("very good" agreement)

The average score for propaganda: 0.7015 ("good" agreement)

F1-scores:

The average F1-score for bias is 0.653 .

The average F1-score for propaganda is 0.733

Results

Sina team achieved (among 17 teams)

SubTask	Track	1st Place	2nd Place	3rd Place
Bias	Guidelines	NLPColab	Eagles	Narrative Navigators
Bias	IAA Quality	NLPColab	JusticeLeague	**Sina**
Bias	Quantity	NLPColab	NLPColab	**Sina**
Bias	Consistency	DRAGON	NLPColab	Narrative Navigators
Propaganda	Guidelines	The Lexicon Ladies	Biaf Bluff Busters	**Sina**
Propaganda	IAA Quality	NLPColab	**Sina**	The CyberEquity Lab
Propaganda	Quantity	NLPColab	**Sina**	The CyberEquity Lab
Propaganda	Consistency	NLPColab	Biaf Bluff Busters	Sahara Pioneers/The CyberEquity Lab

Results

Bias Distribution

Class	Ar	En	He	Fr	Hi	Total
Biased against palestine	466	514	595	807	534	2916
Biased against Israel	94	79	23	19	70	285
Biased against Both	6	7	11	6	14	44
Biased against Others	42	28	53	39	49	211
Unbiased	1371	1486	1369	1212	1386	6824
Not Applicable	49	7	17	20	25	118
Unclear	132	39	92	57	82	402
Total	2160	2160	2160	2160	2160	2160

27% of posts biased against Palestine

63% of posts are unbiased

Most bias against Palestine originated from French posts.

Results

Propaganda Distribution

Class	Ar	En	He	Fr	Hi	Total
Propaganda	524	679	648	**809**	673	**3333**
Not Propaganda	1484	1443	1447	1297	1413	**7084**
Not Applicable	48	11	17	16	24	**116**
Unclear	104	27	48	38	50	**267**
Total	**2160**	**2160**	**2160**	**2160**	**2160**	**2160**

31% of posts (3,333) annotated as "Propaganda”

66% of posts (7,084) annotated as "Not Propaganda”

Majority of propaganda is from French posts

Results

Types of Bias

Most posts with **Explicit bias** are in Hebrew

Types of Bias	Ar	En	He	Fr	Hi	Total
Explicit(تحيز صريح)	394	366	**563**	412	388	**2093**
Implicit (تحيز ضمني)	199	217	265	236	269	**1186**
Vague (تحيز مبهم)	36	37	59	52	27	**211**

Types of Propaganda :

Most posts classified as propaganda that must be deleted are in French (348 posts)

Class	Ar	En	He	Fr	Hi	Total
Propaganda Must be deleted	192	191	266	348	277	**1274**
Propaganda May be deleted	542	488	382	461	396	**2059**
Propaganda not to be deleted	451	422	565	648	436	**2522**

Thank You

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