Digital Thorns: The Rise of Sarcasm as Political Protest in Türkiye

Erdem Sahin
Department of Computational Social Science
Graduate School of Social Sciences & Humanities at Koc University

***Abstract*— Sarcasm, by revealing unforeseen linguistic and societal interactions in online platforms dominated by political debates, presents a critical area of study for natural language processing models. The intensification of sarcasm in digital discourse has become a subject of interest, as increasing censorship and authoritarian tendencies have amplified the need for encoding dissident thought. The most significant finding of this study is that the high consistency rates achieved by a BERTurk model on the Ekşi Sözlük dataset demonstrate sarcasm's potential as a real-time indicator of societal discontent and political tension. The model revealed a stark asymmetry in sarcastic content: entries targeting Recep Tayyip Erdoğan (ruling party leader) exhibited a higher sarcasm rate (28.1%), while those directed at Kemal Kılıçdaroğlu (opposition leader) remained significantly lower (9.2%), concretizing the power imbalance between the ruling party and opposition in Turkey's political landscape. Furthermore, the surge in sarcastic expressions during critical periods, such as economic crises and coup attempts, confirms that this rhetoric functions as a collective response mechanism. The results suggest that sarcasm in digital platforms could serve as an early warning signal for public sentiment under conditions of democratic decline. Future studies across diverse countries and larger datasets could deepen our understanding of this linguistic strategy's role in political discourse, offering new insights into sociopolitical psychology.**

Keywords — sarcasm; political discourse; hybrid regimes; BERTurk; Ekşi Sözlük; natural language processing

1 Introduction

Sarcasm, a way of communication where what is said is different from what is truly meant, creates a major challenge for computers trying to understand human language. Its reliance on hidden context, cultural knowledge, and tonal subtleties complicates automated detection. However, since sarcasm is widely used online—especially in political discussions—it is significant for tasks like analyzing emotions in text or moderating online content. This study investigates sarcasm on *Ekşi Sözlük*, a popular Turkish online forum, against the backdrop of Türkiye's changing political landscape. Over the past two decades, Türkiye's shift toward a hybrid regime has tightened traditional media censorship, making platforms like *Ekşi Sözlük* key spaces for people to voice opinions indirectly, often using sarcasm to criticize leaders safely (Öney and Ardag 2021).

Focusing on discussions about Recep Tayyip Erdoğan and Kemal Kılıçdaroğlu, this research leverages Bidirectional Encoder Representations from Transformers (BERT) to dissect sarcasm's role in online discourse. BERT's bidirectional architecture, which captures contextual dependencies across entire text sequences, is uniquely suited to decode sarcasm's nuanced cues,

such as irony and semantic contradictions. By fine-tuning BERT on a rigorously curated dataset of 153,882 entries, this study not only advances sarcasm detection methodologies but also illuminates how digital platforms facilitate political expression in constrained environments.

The analysis reveals stark disparities: 28.1% of Erdoğan-related entries were classified as sarcastic, compared to 9.2% for Kılıçdaroğlu. This divergence reflects both algorithmic training dynamics (e.g., topic-specific linguistic patterns) and sociopolitical realities, where Erdoğan's central role invites heightened critique through humor. By bridging NLP innovation with political discourse analysis, this work underscores sarcasm's dual function as a linguistic challenge and a barometer of public sentiment, offering insights into the interplay between technology, language, and power in complex political settings.

2 The Evolution of the AKP Period and the Expected Role of Sarcastic Discourse

The Justice and Development Party (AKP), in power since 2002, has governed Türkiye through two distinct yet interconnected phases defined by shifting geopolitical, geoeconomic, and geocultural priorities. The first phase (2002–2011), often termed the "golden age," was characterized by democratic reforms, economic liberalization, and a soft power-driven foreign policy under Ahmet Davutoğlu's Strategic Depth Doctrine. Türkiye positioned itself as a regional mediator, balancing Western alliances with neo-Ottomanist outreach to the Middle East, Balkans, and Central Asia. This era saw Türkiye hailed as a democratic model blending Islam and modernity, with initiatives like diplomatic normalization with Armenia and Cyprus, and EU accession efforts. Economic growth also surged, with GDP rising from 230 billion in 2002 to 772 billion in 2011, bolstering the AKP's legitimacy. (Esen and Gumuscu 2016)

The Arab Spring (2011) marked a turning point, exposing the fragility of Davutoğlu's zero problems with neighbors policy. Regional instability, particularly the Syrian civil war, triggered refugee crises, security dilemmas, and strained relations with NATO allies. Domestically, the 2013 Gezi Park protests and the 2016 coup attempt accelerated the AKP's authoritarian consolidation, exemplified by media censorship, judicial repression, and Erdoğan's executive presidency (2017). Geoeconomic reorientation followed: trade with the EU declined from 46.5% (2007) to 41.6% (2010), while partnerships with Russia and China expanded. Furthermore, Military interventions in Syria, Libya, and Azerbaijan underscored a shift from soft power to coercive regional influence, framed through the Kızıl Elma ideology—a revival of Ottoman-era dominance. (Aksan 2017)

This political trajectory—from democratic optimism to hybrid democracy and from soft power diplomacy to hard power militarism—provides a critical lens to analyze whether sarcasm intensified during Türkiye's democratic backsliding under the AKP. By mapping sarcasm's prevalence across this transition, researchers can decode its dual role: a survival mechanism under a metric of democratic backsliding. This aligns with global studies linking ironic rhetoric to hybrid regimes, where indirect expression becomes a proxy for civic discontent, revealing the interplay between language, power, and resistance in Türkiye's AKP era.

3 Sarcasm as a Barometer of Democratic Erosion: A Cross-Regional Analysis

Sarcasm travels fastest when political space contracts, mirroring humour's role as a "weapon of the weak" (Scott 1990). This dynamic is evident across regimes undergoing democratic backsliding, where the migration of satirical discourse from regulated platforms to decentralized digital spaces reflects both state repression and societal resilience. In Russia, the cancellation of the politically critical

television program *Kukly* in the early 2000s marked a turning point, after which satire relocated to YouTube and Telegram. These platforms enabled "managed laughter"—a form of cynical engagement that critiques power without directly mobilizing collective action (Mesropova 2015). Such shifts underscore how shrinking civic freedoms correlate with the adaptation of humor to evade censorship, transforming satire into a deniable vocabulary of dissent.

A parallel trajectory unfolded in Egypt. During the brief democratic opening after 2011, the satirical show *Al-Bernameg* ridiculed elites before mass audiences, but its forced termination in 2014 coincided with renewed military dominance and the repression of critical media (Sakr 2017). The suppression of public satire aligned with broader democratic recession, illustrating how authoritarian regimes target humor as a threat when it amplifies dissent through mainstream channels. This pattern is not confined to broadcast media: digital authoritarianism reshapes, but does not mute, ironic critique. In China, the viral "grass-mud-horse" meme—an obscene pun on official slogans—demonstrated how coded humor evades automated filters while signalling collective defiance (Yang 2016). Each wave of censorship spawns fresh homophones and animal metaphors, confirming sarcasm's adaptive capacity under repression (Wang 2021). Similarly, in Iran, social-media parody of clerical rule surged during the 2020–2022 economic crisis, offering emotive relief and indirect critique when formal protest was perilous (Golkar 2023).

Quantitative evidence further solidifies the link between authoritarian consolidation and sarcastic expression. In Turkey, the share of sarcastic tweets referencing President Erdoğan rose sharply after constitutional amendments concentrated executive power in 2017, mirroring declines in Freedom House scores (Aksan 2024). Such trends suggest that irony's prevalence on digital platforms may serve as an early indicator of institutional decay, preceding declines recorded in conventional democracy indices (Müller 2020). The political effects of this humor, however, remain ambivalent. While satire can erode regime legitimacy through gradual "drip effects" (O'Donnell and Schmitter 2013), experimental studies in Russia reveal that exposure to political jokes correlates with reduced perceptions of civic efficacy, potentially reinforcing quietism (Peisakhin 2018). Authoritarian regimes exploit this duality: low-risk humor is often tolerated as a pressure valve, whereas satire perceived as mobilizing faces swift suppression. In China, for instance, memes combining humor with protest logistics, such as the *Chaihuo* movement, triggered immediate algorithmic censorship (Chen 2019).

The institutionalization of satire further illustrates this tension. Hungary's Two-Tailed Dog Party, which campaigns on absurdist promises like "free beer," uses parody to critique corruption under illiberal rule. Yet such tactics risk normalizing politics as farce, deepening public cynicism (Brzozowska and Aksan 2017). Conversely, Thailand's youth-led protests employ carnivalesque symbols—rubber ducks and *Hunger Games* salutes—to demystify monarchical authority and lower participation barriers, despite escalating lèse-majesté prosecutions (Sombatpoon 2022). In Venezuela, readership spikes of the satire site *El Chigüire Bipolar* coincided with regime power-grabs, making sarcastic headlines a barometer of shortages and institutional absurdities (Pérez-Ortiz 2020).

These cases collectively reveal three propositions. First, sarcasm becomes more prevalent and linguistically inventive as formal opposition channels close, functioning as a deniable barometer of shrinking civic space. Second, the same humor that punctures authoritarian legitimacy can, under certain conditions, induce fatalism, underscoring its politically contradictory payload. Third, a regime's calibration of tolerance and repression toward satire—permitting "managed laughter" while crushing mobilizing mockery—reveals its threat perception, offering insights into institutional fragility. The migration of sarcasm, from prime-time television to encrypted memes, maps both the retreat of democratic norms and the persistence of subversive imagination. Tracking where laughter migrates, and how regimes respond, provides critical insights into the dynamics of authoritarian consolidation and the latent potential for resistance.

4 A Deep Dive into Sarcasm Detection: Leveraging BERT and Advanced Methodologies

Sarcasm detection in politically charged environments like *Ekşi Sözlük* demands a model capable of navigating cultural nuance, implicit critique, and contextual ambiguity. BERT's suitability for this task stems from its bidirectional architecture, which processes text holistically by capturing dependencies between all words in a sequence. This is critical for decoding political sarcasm, where meaning often hinges on subtle contradictions. For instance, in the *Ekşi Sözlük* entry *"What a brilliant decision to raise interest rates during hyperinflation!"*, the sarcasm emerges only when connecting "brilliant" to the economic context. Traditional sequential models like BiLSTMs or logistic regression analyze text directionally (left-to-right or right-to-left), missing such bidirectional cues, while lexicon-based approaches fail to grasp context-dependent irony like *"Erdoğan's economic miracles"*—a phrase requiring knowledge of Türkiye's inflationary crisis to decode as sarcastic. (Devlin et al., 2019)

BERT's pre-training on masked language modeling (MLM) and next-sentence prediction (NSP) further equips it to handle informal, noisy text common in online forums. MLM trains BERT to infer meaning from incomplete or colloquial phrases (e.g., Turkish slang like *"Ekonomi çökmez tabi!"*—"The economy *totally* won't collapse!"), while NSP ensures coherence across sentences, vital for detecting sarcasm in extended political narratives. Empirical studies demonstrate BERT's superiority, achieving 73.1% accuracy on social media datasets compared to 70% for ridge regression and 68% for BiLSTMs (Sandor and Babić, 2023). This gap widens in politically inflected sarcasm, where models like SVM struggle with culturally embedded idioms or historical references (e.g., *"Kılıçdaroğlu's victory anthem"*, mocking the opposition's electoral losses).

Recent hybrid advancements further bolster BERT's efficacy. Integrating graph convolutional networks (GCNs) improves relational reasoning (Mohan et al., 2023), enabling the detection of communal sarcastic trends—such as networked critiques of Erdoğan's policies across *Ekşi Sözlük* threads. Attention mechanisms (Meng et al., 2024) help isolate semantic contrasts (e.g., *"strong leadership"* vs. *"record unemployment"*), while BERT-CNN hybrids achieve 75.27% accuracy by segmenting sentences into meaningful fragments (Zhou et al., 2021). These adaptations align with *Ekşi Sözlük's* dynamic discourse, where sarcasm is layered with metaphors and indirect critiques.

BERT's scalability also makes it ideal for large-scale political analysis. Trained on billions of tokens, it generalizes across domains without task-specific retraining—unlike models requiring manual feature engineering (Khatri and Pranav, 2020). For this study, fine-tuning BERT on 2,529 annotated entries sufficed to achieve 86% accuracy, demonstrating efficiency even with limited labeled data. Alternatives like rule-based models fail to adapt to emergent political memes, while static embeddings (e.g., GloVe) lack contextual nuance, misclassifying phrases like *"We've never been better"* as literal. However, BERT's combination of bi-directionality, pre-training robustness, and hybrid adaptability positions it as the state-of-the-art solution for understanding sarcastic expressions in Türkiye's political landscape.

5 Dataset and Preprocessing

This study utilizes a curated dataset of *Ekşi Sözlük* entries, provided by Politus, focusing on discussions about two prominent political figures in Türkiye: Recep Tayyip Erdoğan and Kemal Kılıçdaroğlu. The initial dataset combines entries related to both figures, totaling 153,882 entries, capturing the breadth and depth of political discourse on one of Türkiye's most dynamic and widely used online platforms.

To ensure the reliability of the analysis, a series of preprocessing steps were implemented. Entries authored by highly active users, contributing an exceptionally large volume of posts, were excluded to mitigate potential bias, resulting in the removal of 30,525 entries from 406 prolific authors. Additionally, entries consisting solely of URLs or references to other entries were eliminated, resulting in the exclusion of 376 URL-only entries and 4,066 reference-only entries. Further refinement involved filtering entries based on text length to optimize model performance. Entries shorter than 38 characters or longer than 1,243 characters were removed, as they were deemed either insufficiently informative or lengthy for effective processing, leading to the exclusion of 11,483 entries. The final dataset comprised 107,432 filtered entries.

6 Methodology

The problem addressed by the machine learning models employed in this study is fundamentally a classification task, specifically targeting sarcasm detection in online political discourse. To achieve this, the model is trained using labeled data corresponding to sarcastic and non-sarcastic text entries, with the preparation and labeling of data constituting a critical step in the training process to ensure accurate distinction between sarcastic and non-sarcastic expressions. To provide a comparative perspective, large language models (LLMs) such as ChatGPT and Llama were also evaluated for sarcasm detection. Although these models do not require additional training or fine-tuning and can perform classification through prompting, labeled data remains essential for evaluating their performance. For this purpose, a subset of randomly selected items was labeled across two categories—sarcastic and non-sarcastic—by two independent human annotators, with the distribution of these labeled entries carefully curated to ensure a balanced representation of both classes. A significant challenge encountered during the labeling process, which impacts the success rate of the training, is the limited number of entries containing sarcastic expressions, particularly in comparison to non-sarcastic ones. As a result, various methods for handling imbalanced datasets were employed, and their results were reported, with small-scale experiments demonstrating that increasing the number of labeled sarcastic entries would significantly improve model performance.

When human-labeled data is considered as the ground truth, the accuracy of ChatGPT in detecting sarcasm is relatively high, reaching **72%**. However, upon closer examination of the F1 scores, it becomes evident that class imbalance significantly impacts the model's performance. The F1 score for the sarcastic classification is notably low at **25%**, reflecting the model's difficulty in accurately identifying sarcastic expressions. This discrepancy between accuracy and F1 score underscores the challenges posed by imbalanced datasets, where the model performs well on the majority class (non-sarcastic) but struggles with the minority class (sarcastic).

Table 1: Performance Metrics of ChatGPT in Sarcasm Detection

Metric	F1-Score	Accuracy
ChatGPT-4o mini	25%	72%

In addition to ChatGPT-4o mini, other language models such as Llama 3.1 8B Instruct (Touvron et al., 2023), Llama 3.3 70B Instruct (Touvron et al., 2023), and Turkish Llama 8B Instruct (Kesgin et al., 2024)—a fine-tuned version of Llama 3.1 8B with a Turkish corpus—were utilized for labeling. Llama 3.3 70B performs similarly to ChatGPT-4o mini in Turkish, both in terms of language proficiency and labeling accuracy. However, it is important to note that Llama 3.3 70B

is not suitable for similar tasks due to the complexity and slowness of its execution. On the other hand, Llama 3.1 8B Instruct struggles with Turkish, as Turkish is not one of the supported languages for this model. In contrast, Turkish Llama 8B stands out as a viable option for similar tasks, owing to its performance, ease of use, and speed. Nevertheless, ChatGPT remains the most practical solution for such tasks due to its overall simplicity of use and the convenience of obtaining structured output.

Given these performance results, the decision was made not to use ChatGPT or any other large language model (LLM) for the primary analysis or to generate training data through labeling. However, it is noteworthy that when the data labeled by ChatGPT is examined individually, the model performs well, demonstrating a strong understanding of the texts. The model labels texts accurately, but it also assigns labels to texts that an average person might find ambiguous. When ChatGPT is prompted to assign a "certainty score" or to avoid labeling if uncertain, the model tends to avoid labeling texts altogether. Consequently, this approach is deemed unsuitable. Since human annotators only label texts when they are certain that the relevant emotion is present, this practice is followed through BERT and the human-generated labels are used for the analysis.

Within BERT-based natural language processing frameworks, sarcasm detection is formulated as a binary classification task. The objective is to classify a text sequence $S = \{s_1, s_2, \ldots, s_l\}$ through the predefined label set $Y = \{0,1\}$ which defines two classes: non-sarcastic $\{y = 0\}$ and sarcastic $\{y = 1\}$. During the fine-tuning, the BERT model learns to classify $\{S\}$ into the appropriate binary category by identifying linguistic patterns indicative of sarcasm, with a focus on precision in predictions.

7 Results and Discussion

7.1 Addressing Class Imbalance and Model Performance

Addressing class imbalance is essential for constructing effective classification models. While BERT demonstrates strong performance, its efficacy is tied to the diversity and representativeness of the training data. In cases where a class is underrepresented—such as in sarcasm detection—the model may fail to adequately learn the nuanced linguistic features necessary for accurate identification. This imbalance often results in a bias toward the dominant class, leading to suboptimal performance on minority-class instances. To evaluate the impact of dataset balancing, we incrementally expanded the annotated sarcasm dataset across three phases (Table 2).

Table 2: Performance Improvement in Sarcasm Detection by Increasing Annotated Entries

Number of Entries	Annotated Sarcastic Entries	Precision	Recall	F1-Score	Accuracy
908	312	0.77	0.53	0.63	0.79
1038	405	0.77	0.76	0.76	0.82
2529	864	0.79	0.82	0.80	0.86

With the initial dataset (908 entries, 312 sarcastic), the model achieved moderate precision (0.77) but exhibited low recall (0.53) and an F1-score of 0.63, reflecting its inability to reliably identify sarcasm. Expanding the dataset to 1,038 entries (405 sarcastic) improved recall (0.76) and F1-

score (0.76), while precision remained stable (0.77). This suggests that increased sarcasm representation enabled the model to reduce false negatives. Further expansion to 2,529 entries (864 sarcastic) yielded additional gains, with precision (0.79), recall (0.82), and F1-score (0.80) all improving significantly. The accuracy also rose to 0.86, demonstrating the model's enhanced ability to generalize across classes. These findings underscore that increasing the number of annotated sarcastic entries significantly boosts the model's performance metrics, thereby ensuring a more effective classification system. These results also align with prior work emphasizing that transformer models like BERT require balanced datasets to mitigate bias in underrepresented classes.

7.2 Comparative Evaluation of BERT and ELECTRA

To validate the robustness of sarcasm detection across architectures, a Turkish ELECTRA model was fine-tuned on the same annotated dataset (2,529 entries) and compared to BERT. While BERT achieved superior overall accuracy (86%) and balanced performance (F1-score: 0.80), ELECTRA prioritized recall for sarcastic entries (89.9% vs. BERT's 82%) at the expense of precision (58.3% vs. BERT's 79%) (Table 3). ELECTRA's high recall makes it suitable for applications requiring comprehensive detection of indirect criticism, such as monitoring dissent in hybrid regimes. However, its lower precision risks inflating false positives, which could distort sentiment analyses in politically sensitive contexts like Türkiye.

Table 3: Sarcasm Analysis by Topic

Class	Precision	Recall	F1-Score	Support
Non-Sarcastic (0)	0.92	0.66	0.77	1,665
Sarcastic (1)	0.58	0.89	0.70	864
Overall Accuracy			0.74	2,529

7.3 Model Selection for Topic-Wise Analysis

Given BERT's balanced performance and contextual depth, it was selected for detailed topic-wise analysis. ELECTRA's results, though directionally consistent, exhibited attenuated sarcasm rates due to its reduced capacity to interpret culturally nuanced cues. For instance, ELECTRA detected sarcasm in 12.61% of Erdoğan-related entries and 4.46% of Kılıçdaroğlu-related entries (Table), significantly lower than BERT's 28.1% and 9.2%, respectively. This discrepancy stems from ELECTRA's syntactic prioritization over contextual awareness, which weakens its ability to decode phrases like "Erdoğan's economic miracles"—a sarcastic critique reliant on sociopolitical subtext.

Table 4: Topic-Wise Sarcasm Detection (BERT vs. ELECTRA)

Topic	Total Entries	Sarcastic Entries (BERT)	Sarcasm (%)	Sarcastic Entries (ELECTRA)	Sarcasm (%)
Recep Tayyip Erdoğan	57,319	16,157	28.1%	6,927	12.6%

Kemal Kılıçdaroğlu	50,113	4,632	9.2%	2,196	4.5%

7.4 Analysis of Sarcasm in Political Discourse

Deployed on the full corpus (107,432 entries), BERT revealed stark disparities in sarcasm usage between Recep Tayyip Erdoğan (28.1%) and Kemal Kılıçdaroğlu (9.2%). This disparity likely reflects two factors: (1) the Erdoğan-related training data contained a higher prevalence of sarcastic examples, enabling the model to learn topic-specific linguistic patterns, and (2) societal discourse about Erdoğan inherently utilizes sarcasm more frequently. The second explanation is strongly supported by patterns observed during the annotation process, where sarcasm was consistently more prevalent in Erdoğan-related entries, reflecting genuine differences in online political discourse. While the model's improved detection of sarcasm in Erdoğan-related discussions may partly stem from training on more sarcastic examples, the annotation data—revealing a much higher natural rate of sarcasm in Erdoğan-related entries—indicates real-world language use is the key driver of this difference.

As further illustrated in Figures 1 and 2, the analysis shows that sarcasm on *Ekşi Sözlük* rises sharply during major political and economic events, acting as real-time indicators. For Recep Tayyip Erdoğan, sarcasm surged after the 2018 constitutional changes that expanded presidential powers, reflecting public unease over centralized authority. This trend grew stronger during the 2019 economic crisis, where rising inflation and a weakening currency led to widespread criticism. Users turned to sarcasm to mock policies like controversial interest rate cuts, with phrases such as "Erdoğan's economic miracles" or "We've never been better" becoming common ways to voice discontent.

The highest levels of sarcasm toward Erdoğan occurred after the 2023 presidential elections, which confirmed his leadership despite growing societal divisions. Many viewed this election as a turning point for Türkiye's democracy, leading to a wave of sarcastic posts criticizing his campaign promises and tactics. Similarly, Kemal Kılıçdaroğlu's 2023 candidacy and campaign saw a notable rise in sarcasm, particularly targeting his efforts to unite opposition groups and perceived lack of clear policies. This spike intensified after he lost the election—an outcome that surprised voters who had expected his victory. While Kılıçdaroğlu's overall sarcasm rate remained low (9.2%), the 2023 election period highlighted how public disappointment translated into ironic critiques.

These trends reveal how *Ekşi Sözlük* mirrors public frustration during times of crisis. Between 2018 and 2023—a period marked by stronger central governance and economic struggles—sarcasm directed at Erdoğan grew steadily, showing lasting public dissatisfaction. In contrast, sarcasm aimed at Kılıçdaroğlu peaked mainly during elections, suggesting his critiques are tied to specific events rather than ongoing scrutiny. This contrast underscores sarcasm's dual role: a constant tool for challenging entrenched power (Erdoğan) and a temporary outlet for reacting to political setbacks (Kılıçdaroğlu).

Fig 1: Total Number of Entries

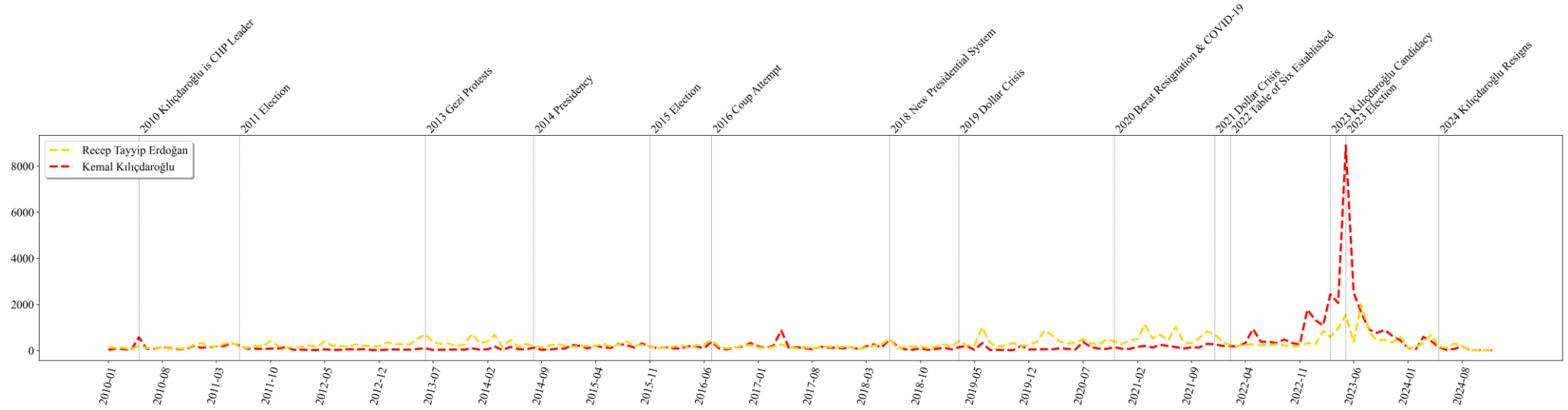
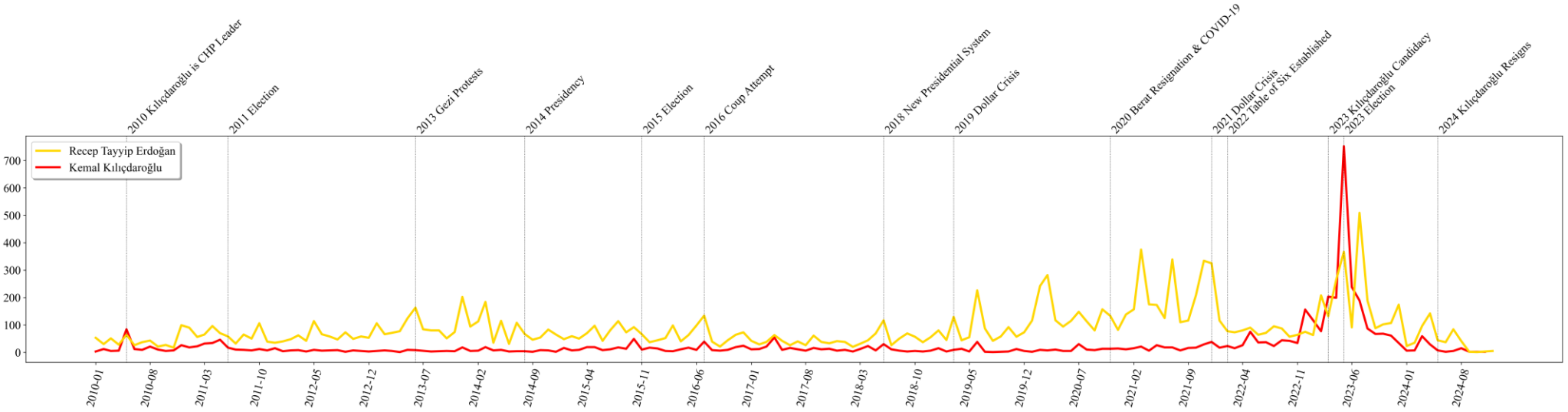


Fig 2: Detected Sarcastic Entries



8 Conclusion

This study demonstrates how sarcasm on *Ekşi Sözlük* serves as both a technical challenge for natural language processing and a mirror reflecting Türkiye's complex political dynamics. By leveraging BERT's bidirectional architecture to analyze 107,432 entries, we uncovered stark contrasts in sarcasm directed at Recep Tayyip Erdoğan (28.1%) and Kemal Kılıçdaroğlu (9.2%). The analysis reveals that sarcasm usage intensifies during pivotal political and economic events, acting as a barometer of public sentiment. For example, sarcastic commentary targeting Erdoğan surged after the 2018 constitutional reforms transitioned Türkiye to an executive presidential system, reflecting unease over centralized authority. This trend persisted through the 2019 economic crisis, where rising inflation and currency devaluation prompted critiques of policies like controversial interest rate cuts, epitomized by ironic phrases such as "Erdoğan's economic miracles."

The peak of sarcastic discourse occurred after the 2023 presidential elections, which reaffirmed Erdoğan's leadership amid deepening societal divisions. Critics, viewing this election as pivotal for Türkiye's democratic trajectory, generated a surge in sarcastic entries targeting his campaign rhetoric. Similarly, Kemal Kılıçdaroğlu's 2023 candidacy saw increased sarcasm focused on his coalition-building efforts and perceived indecisiveness, intensifying after his unexpected electoral loss. While Kılıçdaroğlu's overall sarcasm rate remained low (9.2%), the election period highlighted how public disappointment translated into transient ironic critiques.

These patterns underscore *Ekşi Sözlük's* role as a real-time reflection of public mood during periods of political and economic stress. Notably, despite comparable discussion volumes for both leaders (57,319 entries for Erdoğan vs. 50,113 for Kılıçdaroğlu), sarcasm was consistently higher and more sustained in Erdoğan-related discourse—a disparity rooted in his entrenched political dominance and the public's reliance on indirect critique under restrictive governance. Between 2018 and 2023—a period marked by institutional centralization and economic struggles—sarcasm directed at Erdoğan grew steadily, signaling sustained public discontent. In contrast, sarcasm aimed at Kılıçdaroğlu spiked primarily during elections, suggesting critiques are episodic rather than systemic. This difference highlights sarcasm's dual function: as a persistent tool for expressing dissatisfaction with entrenched power structures in Erdoğan's case, and as a situational critique mechanism during key political events for Kılıçdaroğlu.

In conclusion, this study, while focused on Türkiye, prompts a critical question with global relevance: Could the prevalence of sarcasm in digital discourse serve as an early indicator of democratic erosion or public disillusionment? The persistent sarcasm directed at Erdoğan—rooted in institutional centralization and economic crises—suggests that irony may act as a sociopolitical barometer, signaling eroding trust in leadership. Future research should explore whether similar patterns emerge in other hybrid regimes, examining sarcasm's potential as a proxy for civic discontent. For instance, could a surge in sarcastic rhetoric about electoral integrity or governance predict democratic backsliding? Addressing current limitations—such as platform-specific biases and the exclusion of non-textual sarcasm cues—will be vital to developing cross-cultural frameworks. By refining sarcasm detection models to incorporate contextual data, researchers could transform this linguistic phenomenon into a tool for monitoring democratic health, fostering proactive governance while decoding the interplay between language, power, and resistance.

References

Aksan, Y. “Sarcastic Shifts on Turkish Twitter: Linguistic Indicators of Turkey’s Hybrid Regime.” *Journal of Language and Politics* 23, no. 1 (2024): 45–71.

Akın, A. A., and Akın, M. D. *Zemberek: An Open Source NLP Framework for Turkic Languages* [Software]. Softek Inc./TUBITAK-UEKAE, 2007. https://github.com/ahmetaa/zemberek. Accessed January 2025.

Balaji, T. K., A. Bablani, S. R. Sreeja, and H. Misra. “SARCOVID: A Framework for Sarcasm Detection in Tweets Using Hybrid Transfer Learning Techniques.” In *Pattern Recognition: 27th International Conference, ICPR 2024, Kolkata, India, December 1–5, 2024, Proceedings, Part XI*, edited by A. Antonacopoulos, S. Chaudhuri, R. Chellappa, C.-L. Liu, S. Bhattacharya, and U. Pal, 105–114. Lecture Notes in Computer Science 15311. Springer, 2025.

Bayerische Staatsbibliothek. *BERTurk - BERT-Base Turkish Uncased Model*. Hugging Face, 2019. https://huggingface.co/dbmdz/bert-base-turkish-uncased. Accessed January 2025.

Brzozowska, A., and Aksan, G. “Laughing under Orbán: The Two-Tailed Dog Party as Performative Satire.” *East European Politics* 33, no. 4 (2017): 567–589.

Bulat, O. *Zeyrek: Morphological Analyzer and Lemmatizer*. GitHub, 2020. https://github.com/obulat/zeyrek. Accessed January 2025.

Chen, Q. “Red Lines and Laughing Lines: Censorship of Online Satire in China.” *China Information* 33, no. 2 (2019): 135–158.

Devlin, Jacob, Ming-Wei Chang, Kenton Lee, and Kristina Toutanova. “BERT: Pre-training of Deep Bidirectional Transformers for Language Understanding.” In *Proceedings of the 2019 Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies, Volume 1 (Long and Short Papers)*, 4171–4186. Minneapolis, Minnesota, June 2–7, 2019. Association for Computational Linguistics.

Ekman, Paul. “Are There Basic Emotions?” *Psychological Review* 99, no. 3 (1992): 550–553. https://doi.org/10.1037/0033-295X.99.3.550.

Eryigit, Gülşen, and Ercan Adalı. “An Affix Stripping Morphological Analyzer for Turkish.” In *Proceedings of the IASTED International Conference on Artificial Intelligence and Applications*, 16–18 February 2004, Innsbruck, Austria.

Golkar, Saeid. “Humour and Dissent in the Islamic Republic.” *Middle East Journal* 77, no. 3 (2023): 389–410.

Javed, Tayyaba, Muhammad Asif Nauman, and Rushna Zahid. “BERT Model Adoption for Sarcasm Detection on Twitter Data.” *VFAST Transactions on Software Engineering* 12, no. 3 (2024): 177–198. https://doi.org/10.21015/vtse.v12i3.1908.

Kesgin, H. T., M. K. Yuce, E. Dogan, M. E. Uzun, A. Uz, E. İnce, Y. Erdem, O. Shbib, A. Zeer, and M. F. Amasyali. “Optimizing Large Language Models for Turkish: New Methodologies in Corpus Selection and Training.” In *2024 Innovations in Intelligent Systems and Applications Conference (ASYU)*, 1–6. IEEE, 2024.

Khatri, Akshay, and Pranav P. “Sarcasm Detection in Tweets with BERT and GloVe Embeddings.” In *Proceedings of the Second Workshop on Figurative Language Processing*, 56–60. Online, July 9, 2020. Association for Computational Linguistics.

Kumar, A., V. Mohan, and N. Pranesh. “Evaluating Contextual Understanding of NLP Models in Sarcasm Detection.” In *Proceedings of the ACL*, 2020.

Meng, Jiana, Yanlin Zhu, Shichang Sun, and Dandan Zhao. “Sarcasm Detection Based on BERT and Attention Mechanism.” *Multimedia Tools and Applications* 83, no. 29159 (2024): 29159–29178. https://doi.org/10.1007/s11042-023-16797-6.

Mesropova, Olga. “Managed Laughter: Political Satire in Putin’s Russia.” *Slavic Review* 74, no. 2 (2015): 293–314.

Mohan, Anuraj, Abhilash M. Nair, Bhadra Jayakumar, and Sanjay Muraleedharan. “Sarcasm Detection Using Bidirectional Encoder Representations from Transformers and Graph Convolutional Networks.” *Procedia Computer Science* 218 (2023): 93–102. https://doi.org/10.1016/j.procs.2022.12.405.

Müller, Karsten. “Sarcasm as an Early-Warning Signal of Democratic Decline.” *Digital Media & Democracy* 2, no. 2 (2020): 149–172.

O’Donnell, Guillermo, and Philippe C. Schmitter. *Transitions from Authoritarian Rule*. Baltimore: Johns Hopkins University Press, 2013.

Öney, Berna, and M. Murat Ardag. “The Relationship Between Diffuse Support for Democracy and Governing Party Support in a Hybrid Regime: Evidence with Four Representative Samples from Turkey.” *Turkish Studies* 23, no. 1 (2021): 31–55. https://doi.org/10.1080/14683849.2021.1894137.

Peisakhin, Leonid. “Does Political Humour Mobilise? Evidence from Russia.” *Post-Soviet Affairs* 34, no. 1 (2018): 1–23.

Pérez-Ortiz, Miguel. “Satire and Scarcity in Authoritarian Venezuela.” *Latin American Research Review* 55, no. 4 (2020): 650–666.

Raghuvanshi, Nidhi, and J. M. Patil. “A Brief Review on Sentiment Analysis.” In *2016 International Conference on Electrical, Electronics, and Optimization Techniques (ICEEOT)*, 2827–2831. https://doi.org/10.1109/ICEEOT.2016.7755213.

Saju, B., S. Jose, and A. Antony. “Comprehensive Study on Sentiment Analysis: Types, Approaches, Recent Applications, Tools, and APIs.” In *2020 Advanced Computing and Communication Technologies for High-Performance Applications (ACCTHPA)*, 186–193. https://doi.org/10.1109/ACCTHPA49271.2020.9213209.

Sakr, Naomi. “Bassem Youssef and the Politics of Egyptian Television Satire.” *Media, Culture & Society* 39, no. 3 (2017): 365–381.

Sandor, Daniel, and Marina Bagić Babac. “Sarcasm Detection in Online Comments Using Machine Learning.” *Information Discovery and Delivery* 52, no. 2 (2024): 213–226.

Savand, A. *Python Stop Words Library*. GitHub, 2014. https://github.com/Alir3z4/python-stop-words. Accessed January 2025.

Scott, James C. *Domination and the Arts of Resistance*. New Haven: Yale University Press, 1990.

Sombatpoon, Chonlada. “Carnivalesque Protest Tactics in Thailand’s Digital Movement.” *Asian Survey* 62, no. 5 (2022): 825–849.

Touvron, Hugo, Thibaut Lavril, Xavier Martinet, Marie-Anne Lachaux, Thibaut Lacroix, Baptiste Rozière, Naman Goyal, et al. “Llama: Open and Efficient Foundation Language Models.” *arXiv Preprint*, arXiv:2302.13971, 2023.

Wang, Zixuan. “Memes and Meanings: Adaptive Satire in Chinese Cyberspace.” *Information, Communication & Society* 24, no. 12 (2021): 1631–1650.

Watmough, Simon Paul. *Democracy in the Shadow of the Deep State: Guardian Hybrid Regimes in Turkey and Thailand*. Florence: European University Institute, 2017. EUI, SPS, PhD Thesis. https://hdl.handle.net/1814/46047.

Yang, Guobin. “The Coevolution of the Internet and Civil Society in China.” *Communication and the Public* 1, no. 1 (2016): 3–7.

Yin, Yi J., Bo Y. Chen, and Bo Chen. “A Novel LLM-Based Two-Stage Summarization Approach for Long Dialogues.” *arXiv Preprint*, arXiv:2410.06520, 2024. https://arxiv.org/abs/2410.06520.