Grace Kluender, Ethan Evans, and Evan Fantozzi

Classifying Far-Right Extremism in Social Media: A Supervised Learning Approach

———

Topic

Our model addresses a simple but important question - how likely is a given English-language social media post to be right-wing extremist?
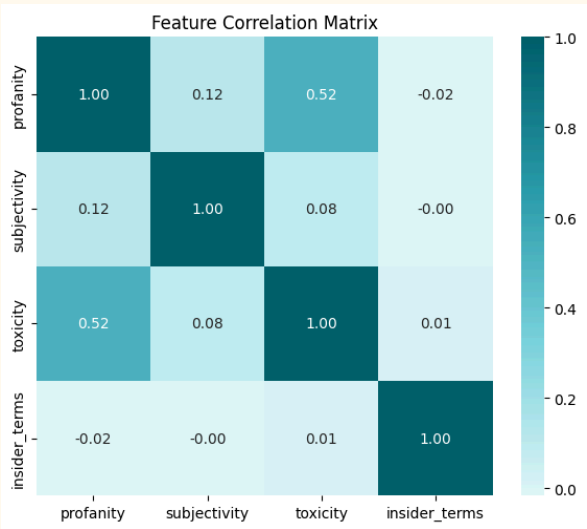
Data

- 4670 social media posts, all manually labeled as extremist or not by our team

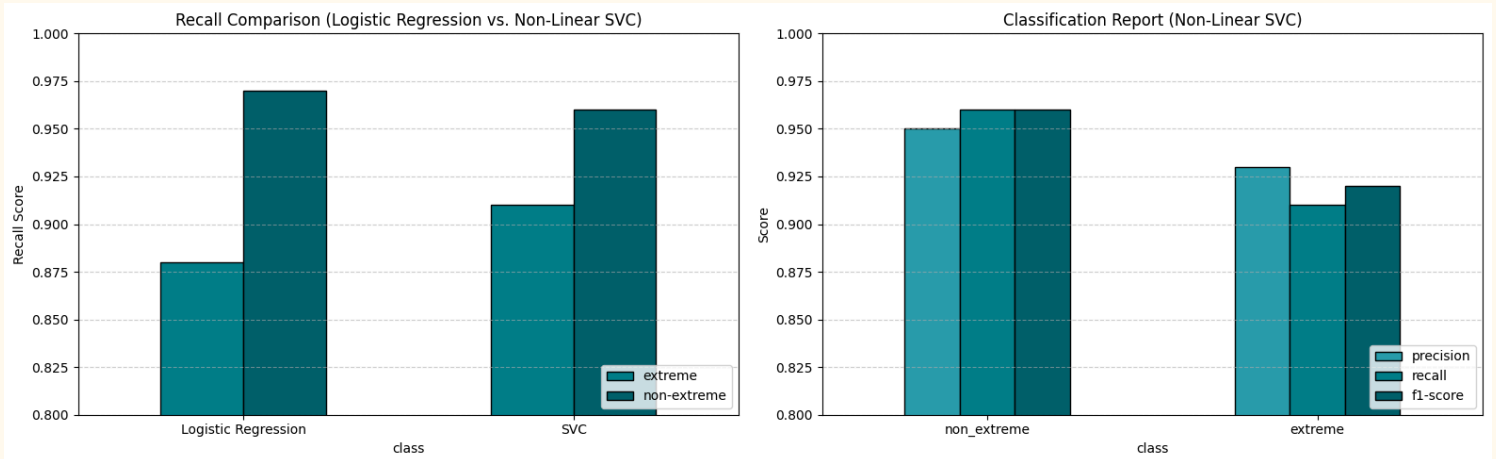| Data Source	Year	# Extreme	# Non-Extreme
Stormchaser	2017	1500	0
Sentiment140	2009	0	1500
TwitterAPI (Manually Scraped)	2024 - 2025	51	1619

Features

- **TF-IDF**: Weighted term frequency

- **MiniLM Sentence Embeddings**: Vector-based semantic similarity

- **Profanity**: Presence of "bad" word or not (0 = Not Present, 1 = Present)

- **Subjectivity**: Extracted via TextBlob (0-1 scale where 0 = Objective, 1 = Subjective)

- **Toxicity**: Extracted via Detoxify (0-1 scale where 0 = Not Toxic, 1 = Toxic)

- **Insider Terms:** Presence of insider term from small list (0 = Not Present, 1 = Present)

Feature Correlation Matrix

Model Selection and Results

We tested **Logistic Regression** and **non-linear Support Vector Machine** models, ultimately choosing the latter due to its higher extremist text recall score, as we are more concerned with avoiding false negatives than false positives.

That said, our model is not perfect - see if you're able to confuse it!

Sample Classifications:

Text	Classification (%)
"I woke up on a white beach with an american flag towel"	Non-Extremist (19%)
"I love the Amazing Race! What a great show about conquering your rivals and finishing number one. I hope they start showing it on Channel USA"	Non-Extremist (23%)
"I don't agree with everything that Trump does, but I think he cares about protecting us"	Non-Extremist (41%)
"We're losing our established identity, and no one seems to care. Guess that's 'progress.'"	Extremist (52%)
"I WILL END INFLATION, I WILL STOP THE INVASION OF CRIMINALS COMING INTO OUR COUNTRY, and I WILL BRING BACK THE AMERICAN DREAM"	Extremist (68%)
"The communist threat is circling in on our culture"	Extremist (97%)