

News Analysis Project: Uncover What Matters

This project helps us understand news articles better by doing 3 things:

1. **Clean Up Articles:** We'll remove unnecessary clutter like punctuation and common words to focus on the main ideas.
2. **Check the Mood:** We'll build a system to figure out if an article is happy, sad, or neutral about a topic.
3. **Find Connections:** We'll look for common themes across many articles, like seeing a pattern in tech news.

Building the System

These 3 analysis modules (clean-up, mood check, and finding connections) will work together as one system. You feed it news articles, and it gives you:

- **Mood Rating:** Is the article positive, negative, or neutral?
- **Short Summary:** Get the key points of the article quickly.
- **Big Ideas:** Find common themes across many articles.
- **Aspect Analysis (Optional):** Gain deeper insights by understanding the sentiment towards different aspects of the news. **(Bonus!)**

Examples of Analysis

1. Clean Up Articles

Article (Original)	Article (Cleaned)
"Researchers discover a new treatment for cancer. This is a major breakthrough! "	"Researchers find new cancertreatment. Big step forward!"
" City council meeting discusses plans for a new park. The meeting was attended by many residents. "	"City council talks new park. Many residents attend."

2. Check the Mood

Article	Mood Rating
"Scientists develop a new solar panel that's more efficient than ever before. This could help us fight climate change!"	Positive
"The economy is struggling, and many people are losing their jobs. This is a worrying trend."	Negative

"A new report details the latest scientific findings on climate change. The report is informative and well-written."	Neutral
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3. Find Connections

Imagine analyzing a set of technology news articles. Here are some possible themes that might emerge:

- Advancements in artificial intelligence
- Growing cybersecurity concerns
- Digital transformation in healthcare

4. Aspect Analysis (Optional)

This optional analysis goes beyond mood and explores sentiment towards different aspects of a news story. Here's an example:

Article	Aspect	Sentiment
"New solar panel developed, but critics say it's too expensive."	Innovation	Positive
	Cost	Negative
"City council approves new park plan, but some residents are concerned about traffic."	Overall Plan	Positive
	Traffic Impact	Negative

Making Sure It Works

We can check the system in two ways:

- Look at the Output:** We'll see if the summaries, mood ratings, and big ideas make sense.
- Use Scores (Optional):** We can use special scores to measure how accurate the system is (**Bonus!**). This is an optional step that shows extra effort. Some special scores can be (precision, recall, f1 etc.)

Deliverables

The final script and a document that exactly tells how to run the program, what tools/libraries you used, and why.



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