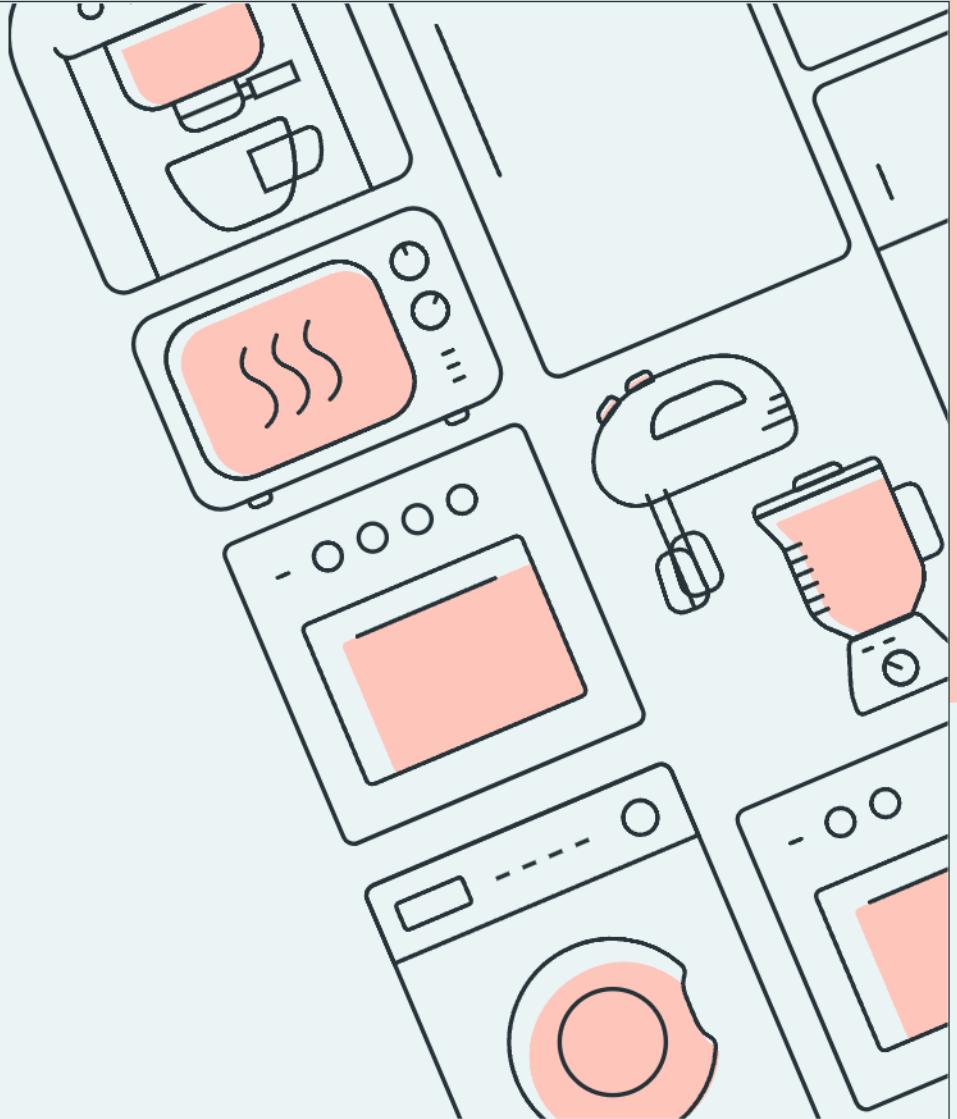


# **News Summarizer with Sentiment Analysis**

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# News Summary Tool Overview

An innovative approach to summarizing news articles swiftly

## 1 Identifying the Problem

Users need quick and dependable news updates.

## 2 Proposed Solution

Develop a tool to summarize news articles efficiently.

## 3 Sentiment Analysis Feature

Analyzes sentiment to provide deeper insights.

## 4 Core Technologies

Utilizes Python, Newspaper3k, and VADER.

## 5 User Interface

Built using Tkinter for a user-friendly experience.

## 6 Data Handling

Employs Pandas for efficient data management.

# Project Features Overview

Explore the essential features of our news analysis tool

## News Article Fetching

Fetches and summarizes articles from URLs.

1

## Sentiment Analysis

Analyzes news sentiment: Positive, Negative, Neutral.

2



## Excel Logging

Logs summaries and sentiment scores with timestamps.

3

## User-Friendly GUI

Features an intuitive GUI for user interaction.

4

# Application Workflow Overview

Understanding the Steps in the News Processing App

## 1 User Inputs a News URL

The process begins with the user providing a news URL.

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## 2 Article is Scraped & Processed

The application scrapes the article content from the provided URL.

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## 3 Summary is Generated Using NLP

Natural Language Processing techniques are used to summarize the article.

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## 4 Sentiment Analysis is Done Using VADER

Sentiment analysis is performed using the VADER tool to determine article sentiment.

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## 5 Results are Displayed in GUI & Logged in Excel

Final results are shown on a graphical user interface and logged into Excel for records.

# Technologies Used in Project

Overview of key technologies used in the project

**Python**  
Main programming language for the project.

**1**

**Pandas**  
Stores summaries in an Excel sheet format.

**6**

**Tkinter**  
Provides GUI for user interaction.

**5**

**Newspaper3k**  
Extracts news content from various sources.

**2**

**NLTK**  
Natural Language Processing for text summarization.

**3**

**VADER Sentiment Analysis**  
Determines sentiment polarity of the text.

**4**



# Why Choose VADER Over TextBlob?

Exploring the advantages of VADER for sentiment analysis

Issues with TextBlob	Positive polarity for negatives	Struggles with context	Why VADER?
TextBlob often misclassifies sentiments.	TextBlob gave positive scores for negative news.	It failed to grasp negations effectively.	VADER excels in sentiment detection.
<b>Detecting negations</b> VADER accurately interprets phrases like 'not good'.	<b>Accuracy for news analysis</b> VADER provides better results for news sentiment.	<b>Compound score feature</b> Offers a balanced view of sentiment.	<b>No training needed</b> VADER works straight out of the box.

# Excel Logging & Timestamp Feature

Streamlining Data Management with Excel

## Logging Summaries Efficiently

Each summary is recorded in summaries.xlsx.

## Detailed Column Structure

Columns include Title, Summary, Polarity, Sentiment, URL, Timestamp.

## Automatic File Creation

Automatically creates the file if it doesn't exist.

# Overcoming Key Challenges

Strategies to Tackle Common Issues in Projects



## TextBlob Inaccuracy

Switched to VADER for improved accuracy.



## Handling Missing or Bad URLs

Implemented error handling techniques.



## Excel File Not Found

Introduced auto-create file feature.

# Future Enhancements

Innovative improvements for enhanced functionality

## ■ Multi-language Support

Introducing support for various languages.

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## ■ Enhanced GUI Design

Improving user experience through design upgrades.

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## ■ Article Summarization Feature

Summarize multiple articles simultaneously.

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## ■ Cloud Storage for Summaries

Enable cloud-based storage for easy access.



## Conclusion and Thank You



### Efficient Tool for Summarization

A fast, efficient, and user-friendly tool.

### Advanced Sentiment Analysis

Overcomes basic sentiment model limitations.

### History of Summaries

Stores summaries for easy reference.