**SENTIMENTAL ANALYSIS**

**🖥️ What is it?**

It’s a **web app** (a website that works like a tool) where anyone can check the **mood or sentiment** of text.

**🚀 What makes it special?**

Most tools only work with plain text.  
👉 But this one can handle **both normal text AND text inside images**.

So, whether you copy-paste words OR upload a screenshot/photo with text, the app can read it and tell you the sentiment.

**🛠️ How does it work?**

* **Streamlit** → Makes the website interactive and easy to use.
* **Pytesseract (OCR)** → Reads text from uploaded images.
* **Newspaper3k** → Pulls text directly from news articles or blogs.
* **NLP (Natural Language Processing)** → Understands the text and figures out if it’s **positive, negative, or neutral**. NLP is like giving computers the power to **read, listen, and understand words like humans do.** NLP turns our words into a **form of numbers** that the computer can process[0,1]
* **Data Visualisation** → Shows results in charts and graphs for easy understanding.

**🎯 Why is it useful?**

* A **student** can analyze the tone of news articles.
* A **business** can check if customer feedback is positive or negative.
* Anyone can upload a **screenshot of a tweet or post** and instantly know its mood.

👉 In short:  
It’s like a **smart mood detector for text**, that works on both **written words and text inside images**, all inside a **simple web dashboard**.

**Slide 2:**

**🧠 Core Technique**

The app uses **NLP (Natural Language Processing)** – a smart computer method that can **understand human language**.

It sorts text into three moods:

* 😊 **Positive**
* 😐 **Neutral**
* 😠 **Negative**

**📌 Where can it be used?**

* **Social media** → Track if people are happy or upset.
* **Customer feedback** → Know what customers really feel.
* **Surveys & public opinion** → Quickly see overall mood.
* **News & media** → Spot bias or tone in reporting.

**🎯 Why is it useful?**

* Helps **find trends, emotions, and attitudes** hidden in digital content.
* Lets companies make **better decisions based on real data**.
* Supports **market research and brand monitoring** by showing what people think.

👉 In short:  
It’s like giving computers the ability to **read between the lines** and tell us the **real mood** behind the words.

Slide4:

## 🌍 Broad Applications Across Sectors

Our Sentiment Analysis Web App helps **different people in different ways**:

### 🎓 Students

* Study how **news and media** shape public opinion
* Useful for **projects, essays, and research**

### 🏢 Businesses

* Track **customer feedback** on products & services
* Understand **brand reputation** in the market

### 🔬 Researchers

* Spot **trends in public opinion**
* Analyse **large datasets** quickly and clearly

### 👤 Casual Users

* Fun and easy way to check the **mood of posts, tweets, or news**
* Explore what people feel about any **topic of interest**

👉 In short:  
From **classrooms to companies**, from **research labs to everyday users**—this tool makes understanding digital content **simple, insightful, and engaging**.

Slide5:

## 🚀 Our Driving Motivation: Bridging the Gap

### 🌐 Information Overload

* Every day, **huge volumes of online content** are created.
* **Opinions strongly influence public behaviour**.
* **Manually analysing** all this content is impossible.
* We need **automation** to quickly make sense of information.

### ⚠️ Tooling Limitations

* Many tools are **too technical** and hard for everyday users.
* Current tools often **miss valuable insights**.
* Most **ignore text in images** (memes, posters, screenshots).
* Yet, images are now a **major part of digital conversations**.

### ✅ The Need for a Holistic Solution

* A tool that is **simple, accessible, and powerful**.
* Should analyse **both text and images together**.
* **Multi-dimensional analysis** (tone, subjectivity, trends) gives richer insights.
* Leads to **more accurate, inclusive, and meaningful understanding**.

👉 In short: We aim to **bridge the gap** by creating a tool that makes sentiment analysis **easy, complete, and insightful for everyone**.

Slide6:

## 🛠️ Our Robust Technology Stack

Our app is built with **modern, open-source tools** chosen for their strengths. Together, they make sentiment analysis **simple, powerful, and interactive**.

### 🌐 ****Streamlit****

* Creates the **interactive web interface**
* Lets users input text, analyse articles, and see results **instantly**

### 🖼️ ****Pytesseract (OCR)****

* Reads **text inside images** (memes, posters, screenshots)
* Expands analysis beyond just plain text

### 📰 ****Newspaper3k****

* **Scrapes and cleans news articles** from the web
* Gets text ready for analysis in seconds

### 💬 ****TextBlob****

* Core engine for **sentiment analysis**
* Measures:
  + **Polarity** → Positive / Negative
  + **Subjectivity** → Opinion / Fact

### 📊 ****Matplotlib & Seaborn****

* Create **clear charts and graphs**
* Turn raw results into **easy-to-understand visuals**

### 📂 ****Excel Dataset****

* Stores **sample articles** for offline testing
* Provides quick **ready-to-analyse content**

👉 In short: This **tech stack** combines **AI, OCR, web scraping, and visualisation** to give users a **seamless all-in-one sentiment analysis tool**.