1. Determining News Categories

Purpose: Automatically classify news articles into categories (e.g., Technology, Health, Sports).

How It Works:

- The article's title, description, and content are sent to GPT.
- GPT determines which predefined category (e.g., "Business" or "Technology") the article belongs to.

Prompt in code:

Example Prompt:

"Given this news article information, categorize it into ONE of these categories: US, World, Business, Technology, Science, Health, Sports, Lifestyle, Travel.

Title: Tesla reports record earnings

Description: Tesla achieved record earnings this quarter...

Content: Tesla's financial performance outpaced analyst expectations.

Return ONLY the category name."

2. Improving News Titles

Purpose: Some news titles are too long, complex, or unclear. Additionally, We have to ensure that the rewritten titles do not violate copyright laws. By using GPT, I created new titles that are shorter, clearer, more engaging, and entirely original.

How It Works:

- The original title, description, and content are sent to GPT.
- GPT generates a new title that summarizes the article accurately and attractively.

```
Main Article Analysis Request:
    Title: ${mainArticle.title}
    Content: ${mainArticle content | mainArticle description}
    Category: ${category}
    Related Coverage:
    ${relatedArticlesWithContent
      .map(
        (article) => `
    - ${article.title} (${article.source})
      Content: ${article.fullContent | article.content | |
article.description}`
      .join("\n")}
    Please provide a comprehensive news analysis addressing the following
elements:
    1. Summary (2-3 paragraphs, max 20 sentences):
       - Who, What, When, Where, Why, and How with specific details
       - Include relevant numbers, proper nouns, and concrete examples
       - Historical context and background information
    2. Multiple Perspectives:
       - Present diverse viewpoints from different news sources
       - Highlight any contrasting opinions or interpretations
       - Include expert opinions when available
```

- 3. Impact Analysis:
 - Immediate effects
 - Potential long-term consequences
 - Who is affected and how
- 4. Supporting Context:
 - Related historical events
 - Previous developments
 - Relevant statistics or data

Writing Guidelines:

- Maintain warm, accessible language while adhering to journalistic standards
 - Ensure objectivity and neutrality
 - Avoid sensationalism and emotional manipulation
 - Use clear, concise language
 - Include verified information only
 - Acknowledge any limitations in available information
 - End with a constructive or forward-looking perspective

Prompt example:

"

Given this news article information, create a clear, engaging, and informative title.

Original Title: Tesla reports record earnings

Description: Tesla achieved a new record in earnings this quarter...

Content: Tesla's financial performance outpaced analyst expectations.

Guidelines:

- Keep it under 100 characters
- Be accurate and factual
- Avoid clickbait
- Ensure the title is original and does not replicate the phrasing of the source

"

3. Analyzing News Content

Purpose: Provide an in-depth analysis of the news, including a summary, multiple perspectives, and the impact of the event.

How It Works:

- The article's title, content, and details of related articles are sent to GPT.
- GPT analyzes the article based on these points:
 - o **Summary**: Who, What, When, Where, Why, and How.
 - o **Multiple Perspectives**: Views and opinions from different sources.
 - o Impact Analysis: Immediate and long-term effects of the event

```
Main Article Analysis Request:
    Title: ${mainArticle.title}
    Content: ${mainArticle content | mainArticle description}
   Category: ${category}
   Related Coverage:
    ${relatedArticlesWithContent
      .map(
        (article) => `
    - ${article title} (${article source})
      Content: ${article.fullContent || article.content ||
article.description}`
      .join("\n")}
   Please provide a comprehensive news analysis addressing the following
elements:
    1. Summary (2-3 paragraphs, max 20 sentences):
       - Who, What, When, Where, Why, and How with specific details
```

- Include relevant numbers, proper nouns, and concrete examples
- Historical context and background information
- 2. Multiple Perspectives:
 - Present diverse viewpoints from different news sources
 - Highlight any contrasting opinions or interpretations
 - Include expert opinions when available
- 3. Impact Analysis:
 - Immediate effects
 - Potential long-term consequences
 - Who is affected and how
- 4. Supporting Context:
 - Related historical events
 - Previous developments
 - Relevant statistics or data

Writing Guidelines:

- Maintain warm, accessible language while adhering to journalistic standards
 - Ensure objectivity and neutrality
 - Avoid sensationalism and emotional manipulation
 - Use clear, concise language
 - Include verified information only
 - Acknowledge any limitations in available information
 - End with a constructive or forward-looking perspective

Example prompt:

"

Main Article Analysis Request:

Title: Tesla reports record earnings

Content: Tesla achieved a new record in earnings this quarter...

Related Coverage:

- Tesla's growth defies odds (Forbes): Tesla saw a surge in its financial performance...
- Elon Musk's Tesla reports record profits (BBC): Analysts were surprised by...

Please provide a comprehensive news analysis addressing:

- 1. Summary (Who, What, When, Where, Why, How)
- 2. Multiple Perspectives
- 3. Impact Analysis
- 4. Supporting Context"

4. Sentiment Analysis

Purpose: Identify the emotional tone of the news article — is it positive, negative, or neutral?

How It Works:

- The article's summary and details are sent to GPT.
- GPT analyzes the content and provides a breakdown of positive, neutral, and negative tones as percentages.

```
Given a news article, analyze its sentiment and provide a percentage breakdown
with careful consideration of specific content markers:
          NEGATIVE markers (weight heavily):
          - Deaths, accidents, disasters
          - Violence, crime, conflict
          - Economic losses, bankruptcies
          - Environmental damage
          - Social problems, discrimination
          - Health crises, illnesses
          POSITIVE markers (weight heavily):
          - Achievements, successes, victories
          - Scientific/medical breakthroughs
          - Economic growth, job creation
          - Environmental improvements
          - Social progress, unity
          - Health improvements, recoveries
          - Aid, rescue, support actions
          NEUTRAL markers:
          - Factual statements
          - Statistical reports
          - Procedural updates
          - Policy announcements
```

```
- General information

Return ONLY a JSON object with three percentage values that sum to 100:

{
    "positive": N,
    "neutral": N,
    "negative": N
}
```

5. Extracting Keywords

Purpose: Identify the most important keywords from the article title. These keywords summarize the article and help find related news.

How It Works:

- The title is sent to GPT.
- GPT extracts 2–3 essential keywords from the title.

```
Extract 2-3 most essential search terms from the news title that would yield
the best search results.
         Guidelines:
          - Focus on core topics, entities, or events
          - Remove unnecessary words (articles, conjunctions)
          - Keep proper nouns and specific terms
          - For numbers or statistics, keep only if crucial to the story
          - Avoid overly specific details that might limit search results
          Return only the keywords separated by spaces, no punctuation.
          Examples:
          Input: "U.S. Senate approves $95 billion aid package for Ukraine and
Israel"
          Output: Ukraine Israel aid
          Input: "Tesla reports record quarterly earnings despite market
challenges"
          Output: Tesla earnings record
```