News Article Generator using GenAI

ITSOLERA GEN_AI **TEAM BETA**

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Overview

Project Overview: AI-Powered News Curator with User Insights

This project is a sophisticated AI-driven system for curating news content and generating valuable user insights. It leverages multiple advanced language models (LLMs) and APIs to achieve a comprehensive news gathering, editing, and analysis workflow.

Key Features

1. **Automated News Research:**
    - **LLM (ChatCohere):** Employs Cohere's LLM for intelligent news gathering. The agent conducts thorough online research on a given topic, identifying relevant and recent news articles. It summarizes articles, ensures they are directly related to the topic, and verifies source credibility.
2. **News Editing and Enhancement:**
    - **LLM (ChatCohere):** The editor agent, also powered by Cohere, refines the raw news content. It rewrites titles for greater engagement, adds context to each article to highlight its significance, and verifies accuracy. Additionally, it prioritizes the most important news stories.
3. **Real-Time User Insights (Taskflow.ai, Exa.ai, OpenRouter):**
    - **LLM (Openrouter's Haiku):** Integrates Taskflow.ai with the Haiku LLM and leverages the Exa.ai search tool. This enables real-time analysis of user behavior based on the latest data related to the given topic. It generates user profiles, identifies trends, and provides confidence scores for the data.

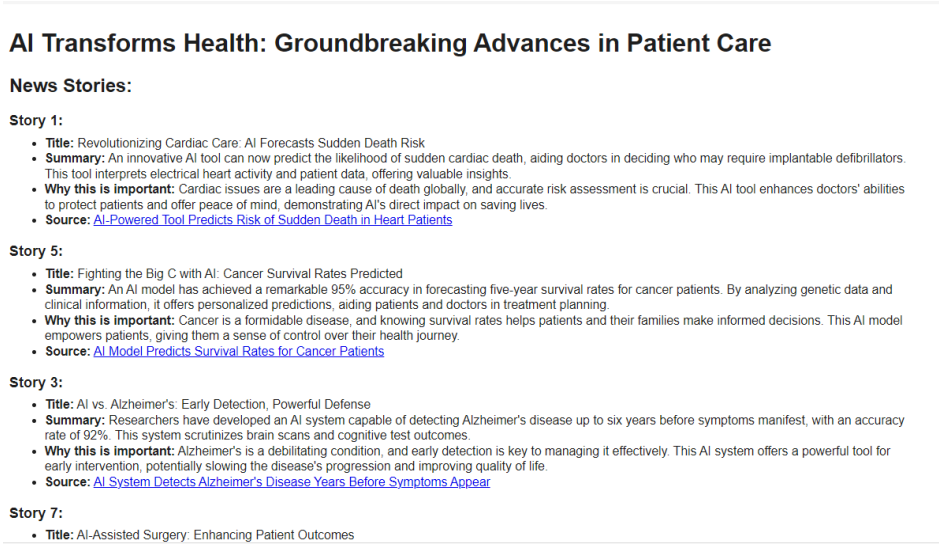
4. **Interactive Web Interface (Gradio):**
    - Provides a user-friendly web interface where users can easily input a news topic and receive a curated newsletter in return.

Technical Components

- **Libraries:** Crewai, CrewAI Tools, Langchain Community, TaskflowAI, ChatCohere, OpenRouter, Exa.ai
- **APIs:** Cohere, OpenRouter, Exa.ai
- **Web Framework:** Gradio

Workflow

1. **User Input:** A topic is provided through the Gradio interface.
2. **News Research:** The "researcher" agent searches for relevant news articles using the Cohere LLM.
3. **News Editing:** The "editor" agent refines and enhances the news content.
4. **User Insights:** The Taskflow.ai component (with OpenRouter and Exa.ai) analyzes real-time user behavior and trends related to the topic.
5. **Output:** A curated newsletter, incorporating the latest news and user insights, is presented to the user.



AI Transforms Health: Groundbreaking Advances in Patient Care

News Stories:

Story 1:

- **Title:** Revolutionizing Cardiac Care: AI Forecasts Sudden Death Risk
- **Summary:** An innovative AI tool can now predict the likelihood of sudden cardiac death, aiding doctors in deciding who may require implantable defibrillators. This tool interprets electrical heart activity and patient data, offering valuable insights.
- **Why this is important:** Cardiac issues are a leading cause of death globally, and accurate risk assessment is crucial. This AI tool enhances doctors' abilities to protect patients and offer peace of mind, demonstrating AI's direct impact on saving lives.
- **Source:** AI-Powered Tool Predicts Risk of Sudden Death in Heart Patients

Story 5:

- **Title:** Fighting the Big C with AI: Cancer Survival Rates Predicted
- **Summary:** An AI model has achieved a remarkable 95% accuracy in forecasting five-year survival rates for cancer patients. By analyzing genetic data and clinical information, it offers personalized predictions, aiding patients and doctors in treatment planning.
- **Why this is important:** Cancer is a formidable disease, and knowing survival rates helps patients and their families make informed decisions. This AI model empowers patients, giving them a sense of control over their health journey.
- **Source:** AI Model Predicts Survival Rates for Cancer Patients

Story 3:

- **Title:** AI vs. Alzheimer's: Early Detection, Powerful Defense
- **Summary:** Researchers have developed an AI system capable of detecting Alzheimer's disease up to six years before symptoms manifest, with an accuracy rate of 92%. This system scrutinizes brain scans and cognitive test outcomes.
- **Why this is important:** Alzheimer's is a debilitating condition, and early detection is key to managing it effectively. This AI system offers a powerful tool for early intervention, potentially slowing the disease's progression and improving quality of life.
- **Source:** AI System Detects Alzheimer's Disease Years Before Symptoms Appear

Story 7:

- **Title:** AI-Assisted Surgery: Enhancing Patient Outcomes

Potential Applications

- **News Outlets:** Automate the creation of personalized news digests.
- **Market Research:** Gain insights into user interests and behavior related to specific topics.
- **Content Creation:** Develop targeted content strategies based on real-time user data.

Key Innovations

- **Dual LLM Approach:** Uses two separate LLMs for research and editing, optimizing each for its specific task.
- **Real-Time User Insights:** Integrates the latest web search and user behavior analysis to provide cutting-edge insights.