#2 AI Agents / #3 RAG Challenge Statement: Daily News Content Generator

*[**$15,000** worth Bounty to 6x winners] **"information is power"***

Submission Deliverables

1. **Short Video (2-4 Minutes):**
   - Demonstrate how the AI agent retrieves, processes, and generates outputs.
   - Explain the workflows and highlight unique features like tone customization and meme generation.
2. **Slide Deck:**
   - Include problem statement, RAG architecture, workflows, and technical stack.
   - Add visuals like architecture diagrams, demo screenshots, and future enhancements.
3. **GitHub Repository:**
   - Include all source code with documentation for setup, usage, and dependencies.
4. **Landing Page:**
   - Provide a live, responsive page for interacting with the AI agent.

Ensure your solution is submitted by 9pm EST, December 9 at the [official submission link.](#)

1. Challenge Statement

Build an AI agent capable of autonomously retrieving the most relevant daily news articles, summarizing them, and generating engaging social media posts in multiple formats, including text, images, videos, and memes, based on user-defined inputs.

In your solution, please provide the code repository and a brief outline that explains the problem that you are solving and its application. We've provided a design schematic and framework to leverage for structuring.

2. Background/ Context

In a world of fast-moving news cycles, individuals and organizations require tools to quickly synthesize and repurpose information for varied audiences across multiple platforms. This challenge encourages participants to leverage cutting-edge RAG techniques and AI tools to create a highly functional, user-friendly content generation platform.

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3. Where to start?

Steps/Workflow for RAG Integration:

1. **User Input (Prompt):**
   - Users provide a prompt specifying content type and tone (e.g., "Create a LinkedIn post about AI trends today" or "Generate a funny meme about the latest sports news").
2. **Document Retrieval (RAG Core):**
   - Connect to APIs like Bing News Search, Google News, or Reddit to retrieve current, relevant articles or trends.
   - Apply filters for relevance, timeliness, and user-specified criteria.
3. **Summarization & Knowledge Synthesis:**
   - Use an LLM (e.g., GPT-4) to summarize the retrieved articles.
   - Rewrite the content to match the desired tone and style (formal, conversational, humorous, etc.).
4. **Multi-Format Post Generation:**
   - **Text:** Generate concise, engaging posts.
   - **Image:** Use AI tools like DALL·E to create visuals based on key insights.
   - **Video:** Generate short videos with voiceover using platforms like Synthesia or Pictory.
   - **Meme:** Add captions to meme templates using APIs like Imgflip or libraries like PIL.
5. **Citation & Transparency:**
   - Ensure credibility by including links or references to the original news sources.
6. **Dynamic Display:**
   - Present generated content on a responsive landing page, allowing real-time previews and downloads.

Key features for Agentic Behaviour:

Autonomous Task Management:
   - Automatically prioritize news sources and adjust tone or format based on user preferences.

Multi-Turn Interaction:
   - Enable iterative refinements based on follow-up prompts (e.g., "Make it funnier" or "Focus on AI ethics").

Proactive Content Suggestions:
   - Suggest trending topics, popular hashtags, or engaging formats based on platform-specific analytics.

Landing Page Requirements

Input Section:
   - A text box for user prompts with an optional dropdown for tone, format, and platform (e.g., LinkedIn, Instagram, Twitter).

Output Section:
   - Displays generated text posts, AI-created images, video previews, and meme templates.

Interactive Refinements:
- Allow users to tweak outputs with additional prompts or by selecting alternate formats.

Example Prompt & Outputs

Input Prompt:
"Create a humorous post about AI replacing jobs for a Twitter audience."

Outputs:
- **Text Post:** "AI's got jokes now? Next thing you know, it's taking over my stand-up gig. #AIvsHumans #TechTakeover"
- **Image:** A cartoon of a robot performing stand-up comedy while a human looks nervous in the audience.
- **Video:** A 10-second clip of a robot saying, "I told my boss I'd automate my job. Now I am the boss," with a futuristic office backdrop.
- **Meme:** Distracted Boyfriend template with captions: Boyfriend: 'My job,' Girlfriend: 'Doing work,' Other girl: 'AI'.

4. Bonus Points

- Video Generation (2 points):
  - Use AI platforms like Synthesia or Runway to create dynamic videos with voiceovers and customizable visuals.
- Meme Creation (1 point):
  - Integrate meme templates with captions generated using LLMs.
  - Allow users to edit captions for personalization.
- Dynamic Content Selection (1 point):
  - Provide options for users to select preferred formats (text, image, video, meme) or generate all formats simultaneously.
- Post Assembly Preview (1 point):
  - Display all formats on a single landing page with tab-based previews.

5. Special bounties

Special bounties have no effect on the judging criteria or quality of your solution, but will make you eligible to win a separate prize pool. For sponsor resources, please see the "resources, templates and sponsors" tab in the community.

- Vectara ($1,500 worth of bounties)
  - Use Vectara in any part of your solution to be eligible.
- Groq ($500 worth of bounties)
  - Use Groq in any part of your solution to be eligible.
- Snaplogic ($500 worth of bounties)
  - Use Snaplogic in any part of your solution to be eligible.

Terms and Conditions

1. **Bounty Structure**
   The bounties awarded during the hackathon consist of a combination of monetary prizes and contributions from our sponsors. These may include, but are not limited to:
   - Prize money (as announced for each challenge category).
   - Sponsor-provided merchandise such as branded apparel, accessories, or tech gear.
   - High-performance hardware such as graphics cards or other specialized equipment.
   - Access to professional development resources, including online courses and certifications.
   - Credits for AI tools, cloud platforms, or other software services.

2. **Distribution of Prizes**
   - Each bounty will be distributed to the winning teams as per the category-specific prize details provided during the event.
   - Non-monetary contributions from sponsors may be distributed either individually to team members or collectively, depending on the nature of the prize.
   - Some prizes may be subject to redemption or delivery processes as outlined by the sponsoring organization.

3. **Eligibility**
   - Participants must comply with all hackathon rules and guidelines to be eligible for bounties.
   - Specific prizes may have additional eligibility requirements, such as geographic restrictions or minimum age criteria, as specified by the sponsor.

4. **Redemption and Use of Sponsor Contributions**
   - Any sponsor-provided credits, courses, or tools are subject to the terms and conditions of the sponsoring organization.
   - Redemption of such prizes may require the creation of an account with the sponsor or adherence to specific timelines.

5. **Substitution of Prizes**
   - In case of unavailability, the organizers or sponsors reserve the right to substitute any prize with another of equal or greater value.
   - Substitutions will be made at the sole discretion of the organizers and sponsors.

6. **Taxes and Duties**
   - Winners are responsible for any taxes, duties, or fees associated with receiving the prizes, as required by their local jurisdiction.

7. **Liability Disclaimer**
   - The hackathon organizers are not responsible for the quality, usability, or warranty of sponsor-contributed prizes.
   - Any disputes regarding sponsor contributions must be resolved directly with the sponsor.

By participating in the hackathon, participants acknowledge and agree to these terms regarding bounties and sponsor contributions. For further clarification, please contact the hackathon organizers.