**Learn Anything from HN -**

Get Top Resource Recommendations from Hacker News

**Workflow: Intelligent Resource Recommendations for Learning**

**Purpose:**  
This workflow is designed to extract and process HackerNews comments related to a learning topic provided by the user, then use an AI chain (via OpenAI and Google Gemini) to generate a categorized list of top resource recommendations. The final output is then sent via email to the user.

**Key Components**

1. User Input

* **GetTopicFromToLearn (Form Trigger):**
  + **Purpose:**  
    Captures the user's learning topic (e.g., "Python", "DevOps", "AI") and email address.
  + **Details:**  
    The form collects two fields: the topic to learn and the user's email. The collected topic will be used as the basis for searching HackerNews comments.

2. Data Collection from HackerNews

* **SearchAskHN (HackerNews Node):**
  + **Purpose:**  
    Searches for HackerNews posts with the "ask\_hn" tag and a keyword matching the user's topic.
  + **Details:**  
    Retrieves up to 150 posts that mention the user's desired learning subject.
* **SplitOutChildrenIDs (Split Node):**
  + **Purpose:**  
    Splits the list of children (comment IDs) from the HackerNews posts for further processing.
* **FindHNComments (HTTP Request Node):**
  + **Purpose:**  
    Fetches the content (comments) of each comment ID split out from the previous node.
* **CombineIntoSingleText (Aggregate Node):**
  + **Purpose:**  
    Aggregates all comment texts into a single text block for analysis.

3. Processing with AI Models

* **Basic LLM Chain (Chain LLM Node):**
  + **Purpose:**  
    Processes the aggregated comment text using an AI model to extract resource recommendations.
  + **Prompt:**  
    Instructs the AI to filter for comments that contain resource recommendations, categorizing them by resource type (e.g., course, book, article) and difficulty level (e.g., beginner, intermediate).
  + **Output Format:**  
    The AI response should be formatted in Markdown with sections for each category, listing recommended resources with brief descriptions and hyperlinks if available.
* **Google Gemini Chat Model (AI Language Model Node):**
  + **Purpose:**  
    Optionally, this node can be used as an alternative or complement to process the input further if needed.
* **Convert2HTML (Markdown to HTML Node):**
  + **Purpose:**  
    Converts the AI output (in Markdown format) into HTML for enhanced formatting in the email.

4. Communication and Output

* **SendEmailWithTopResources (Email Send Node):**
  + **Purpose:**  
    Sends an email to the user with the final formatted list of top resources.
  + **Details:**  
    The email subject and content are dynamically generated based on the user's input and the AI's output.
* **Finished (No Operation Node):**
  + **Purpose:**  
    Acts as a placeholder to mark the end of the workflow.

**Data Flow Overview**

1. **User Input Capture:**
   * The **GetTopicFromToLearn** node collects the learning topic and email.
2. **Data Retrieval:**
   * **SearchAskHN** uses the topic to fetch relevant HackerNews posts.
   * **SplitOutChildrenIDs** breaks down the posts into individual comment IDs.
   * **FindHNComments** retrieves the full text of each comment.
   * **CombineIntoSingleText** aggregates all comment texts.
3. **AI Processing:**
   * **Basic LLM Chain** analyzes the aggregated text and generates a categorized list of resources.
   * **Convert2HTML** converts the AI output from Markdown to HTML.
4. **Output Communication:**
   * **SendEmailWithTopResources** sends the final output to the user's email.
   * **Finished** node signifies workflow completion.

**Configuration and Customization**

* **API Integrations:**
  + Ensure your **HackerNews** node and **OpenAI/Google Gemini** credentials are correctly configured.
  + Update any relevant API keys or tokens in the node credential settings.
* **Prompt Customization:**
  + The prompt in the **Basic LLM Chain** can be tailored to refine the resource extraction process and adjust categorization as per your requirements.
* **Email Setup:**
  + Modify the email settings in **SendEmailWithTopResources** to match your organization's email formatting and sender details.
* **Workflow Expansion:**
  + Additional processing nodes can be integrated if you wish to further refine or transform the AI output before sending the email.