**Hacker News Throwback Machine -**

See What Was Hot on This Day, Every Year!

What does this do?

* **Schedule & Date Generation:**  
  It uses a schedule trigger along with code to generate a list of specific dates (e.g. the same day across multiple years) so that you can review Hacker News front-page headlines for that day over time.
* **Fetching HN Front Page Data:**  
  The workflow sends an HTTP request (to the Hacker News front page URL) for each of those dates, fetching the page content that includes headlines and other metadata.
* **Extracting Headlines & Dates:**  
  It then parses the HTML to extract the headlines (using CSS selectors like .titleline) and the corresponding date information from the page.
* **Aggregating & Structuring Data:**  
  The extracted headlines and dates are merged and aggregated into a single JSON object. This consolidated data provides a historical snapshot of top Hacker News headlines for that day across multiple years.
* **AI-Powered Categorization:**  
  A basic LLM chain (using OpenAI’s GPT-4o-mini) is used to analyze the aggregated data. It categorizes the headlines into themes, adds markdown hyperlinks to the source URLs, and formats the result into a Markdown document with bullet points. Each headline is prefixed with the year it comes from.
* **Output to Telegram:**  
  Finally, the formatted Markdown output is sent to a Telegram channel, allowing you to easily review and share the historical trends and insights from Hacker News.