Exam Alert Automation System

# **1. Project Overview**

This project automates the process of extracting, analyzing, deduplicating, and broadcasting important IBPS RRB (Regional Rural Bank) exam-related notifications. Using the n8n automation platform, the system fetches data from official sources, analyzes it using a Large Language Model (LLM), filters duplicate or outdated content, stores valid alerts in Google Sheets, and sends real-time alerts to Discord.

# **2. Workflow Summary**

• Trigger: Manual trigger in n8n initiates scraping of IBPS exam notifications.

• Scraper: Firecrawl API extracts main content as Markdown, parsed into HTML.

• LLM Analysis: Google Gemini interprets page content via a structured prompt to extract clean, exam-relevant alerts.

• Post-Processing: JavaScript code parses JSON, cleans it, and ensures structure conformity.

• Deduplication: Compares new data with historical records from Google Sheets to eliminate repeats.

• Output: Unique entries are added to a Google Sheet and shared to a Discord channel via webhook.

# **3. LLM Prompt Design**

The LLM is guided by a highly structured prompt to simulate an expert IBPS RRB analyst. It parses HTML to identify relevant notifications and outputs JSON objects containing:

• Title: A concise title without the date

• Summary: A two-sentence explanation of the announcement’s impact on students

• Category: One of a predefined list (e.g., 'Exam Date', 'Result Declared')

• Is\_major\_announcement: Boolean indicating importance

• Source\_url: Link to the original announcement

• Date: In 'DD MMM YYYY' format

# **5. Deduplication Logic**

A custom JS script in n8n compares incoming entries with existing Google Sheet data. Two entries are duplicates if all fields match: title, summary, category, is\_major\_announcement, source\_url, and date. Only unique, valid entries are stored and announced.