NED UNIVERSITY OF ENGINEERING AND TECHNOLOGY

N8N – SOCIAL MEDIA POSTING AUTOMATION

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1 Project Overview

This project implements an **n8n-based Social-Media Posting Automation Workflow** designed to streamline, validate, approve, and publish content across multiple social media platforms. The workflow ensures that all posts follow organizational guidelines through structured approvals, automated checks, and error handling before being published.

The system supports **official and non-official posts**, integrates approval hierarchies, and enables seamless posting to **Instagram, Facebook, and LinkedIn** with proper caption formatting and media validation.
Additionally, it provides **real-time feedback to users** when errors occur, helping maintain content quality and compliance.

2 End-to-End Benefits

- **Centralized Social Media Management**
  Single workflow to manage posting across multiple platforms.

- **Structured Approval Process**
  Reduces the risk of unauthorized or incorrect content being published.

- **Rule-Based Validation**
  Automatically enforces official post guidelines (image dimensions, format, content rules).

- **Real-Time Error Feedback**
  Sends email notifications to users when:

  - Images are private or invalid

  - URLs are incorrect or not from Google

  - Any other issue occurs during the workflow
    This ensures users are aware of mistakes and can correct them promptly.

- **Time Efficiency**
  Eliminates manual back-and-forth between content creators and administrators.

- **Error Handling & Reliability**
  Detects and manages failures gracefully without breaking the workflow.

- **Transparency & Tracking**
  Updates **Google Sheets** with:

  - Form submissions (media link, platform, status, post type)

  - Event logs (post IDs, success/failure, timestamps)
    Each post has a **unique ID** for tracking and updates during the workflow.

- **Flexible Content Formatting**
  Supports:

    o Bullet points

    o Paragraph-based captions

    o Platform-specific caption formats

3 How the Workflow Works

3.1 User Form Submission

- The workflow begins by prompting the user to **fill out a Google Form** containing:

    o Post content

    o Caption text

    o Platform selection (Instagram, Facebook, LinkedIn)

    o Post type (**Official / Non-Official**)

    o Image or media upload

3.2 Initial Validation & Classification

- Checks whether all required fields are filled.

- Determines if the post is **Official** or **Non-Official**.

- Validates media links:

    o Detects invalid or private Google URLs

    o Verifies image dimensions for official posts

- **If an error occurs** (invalid URL, private media, wrong coordinates, etc.):

    o Sends an email to the user explaining the issue

    o Prompts the user to correct and resubmit

    o Updates the tracking sheet with the error status

3.3 Approval Routing Logic

For Official Posts

- Verifies image size and coordinates according to official posting guidelines.

- **If requirements are met:**

  o Post moves to the next stage for admin review.

- **If requirements fail:**

  o Sends email to the user detailing the error.

  o Updates Google Sheet with status.

  o Stops or redirects for correction.

For Non-Official Posts

- Post is routed for **admin review** without strict image validation.

3.4 Admin Approval Stage

- Admin reviews the post:

  o **If approved:**

    ▪ Workflow proceeds to social media publishing.

  o **If rejected:**

    ▪ Email notification sent to the user.

    ▪ Status updated in Google Sheet.

3.5 Social Media Posting

- Publishes posts on selected platforms:

  o Instagram

  o Facebook

  o LinkedIn

- Handles:

  o Caption formatting (paragraphs or bullet points)

  o Platform-specific requirements

  o Media upload and attachment

3.6 Error Handling & Logging

- Errors during posting (API failures, media issues, etc.) are:

  o Logged in the **event log sheet**

- o Email notifications sent to the user with details of the failure

- o Google Sheet updated with failure status

3.7 Final Status Update & Tracking

- **Google Sheet** is updated with:

  - o Media link, platform, post status

  - o Admin remarks

  - o Publisher status

  - o Event logs (post ID, timestamps, success/failure)

- Each post has a **unique ID**, ensuring all updates, corrections, or re-submissions are accurately linked and tracked.
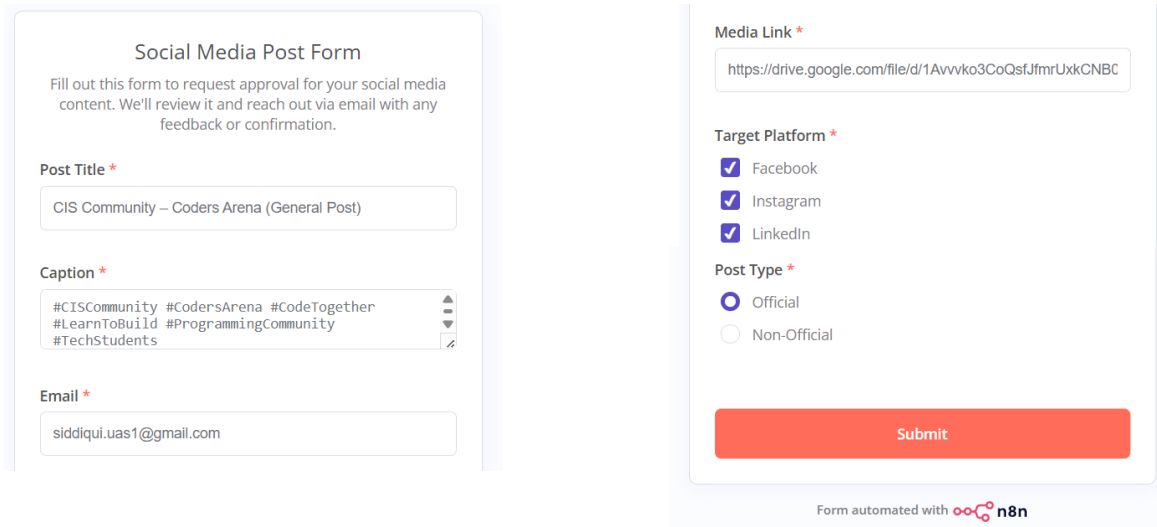
4 Future Enhancements

The workflow is designed to be scalable and adaptable. Planned additions include:

- **Multiple Photo Uploads**

  Allow users to upload more than one image per post, handling galleries or carousel formats.

- **Scheduled Posting**

  Enable posts to be published at specific dates and times for better content planning.

- **Comments Management**

  Automatically track, moderate, or respond to comments on published posts (subject to API capabilities).

- **Mentions Handling**

  Detect and process mentions/tags in captions or comments (if social media APIs allow).

- **Enhanced Error Handling & Logging**

  Include advanced checks for scheduled posts, multiple images, or API limitations.

- **Scalable Reporting**

  Extend Google Sheets or event log to track additional attributes such as scheduled time, number of images, mentions, and comment actions.

5   Workflow Working Snapshots

5.1   Form Filling

Figure 1: Form filling

5.2   Automated Google Sheet Appending

Figure 2: Sheet Update

5.3 Approval For Social Media Posting
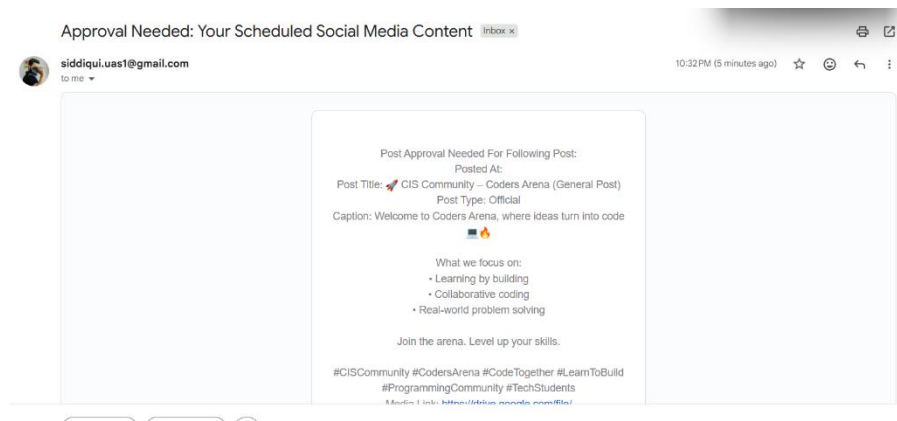

Figure 3: Approval Requirement

5.4 Successful Post on Platforms

5.4.1 Instagram

Figure 4: Instagram Successful Post

5.4.2 LinkedIn

Figure 5: LinkedIn Successful Post

5.4.3 Facebook

Figure 6: Facebook Successful Post

5.4.4 Event Log Update

Dec 14, 2025 22:39 🚀 CIS Community – 18035365205528041	Instagram	Successful
Dec 14, 2025 22:39 🚀 CIS Community – 917306958122443_122109630003130890	Facebook	Successful
Dec 14, 2025 22:39 🚀 CIS Community – urn:li:share:7406025062530674688	LinkedIn	Successful