



Automation Documentation – Social Media & News Sentiment Monitoring

Automation Title

Social Media & News Sentiment Monitoring with Slack Alerts and Airtable Logging

Category

Customer Support / Brand Monitoring / PR

Detailed Description

This automation continuously monitors online news and media mentions for specific keywords (e.g., *AI*, *Microsoft*, or a company name). It classifies each mention as **positive**, **negative**, or **neutral** using a **custom Azure Function with the VADER sentiment lexicon**, then:

- **Sends Slack alerts** for negative mentions so the PR team can act quickly
- **Logs positive mentions into Airtable** for future testimonials or marketing campaigns
- **Logs all mentions into Google Sheets** for centralized reporting and analytics

This ensures that companies stay aware of how they're perceived online, can respond to risks quickly, and collect positive press for long-term brand building.

How It Works (Functionality)

Workflow Breakdown (Step by Step)

1. Trigger – Scheduler

- Runs automatically every 15 minutes.
- Ensures mentions are checked regularly without manual intervention.

2. Fetch Mentions – SerpApi HTTP Request

- Pulls recent Google News articles for a given keyword/hashtag.
- Returns title, snippet, link, and raw date.

3. Prepare Text – Function Node (Text Split/Mapping)

- Maps fetched articles into structured JSON objects with **title**, **snippet**, **link**, and **date**.
- Ensures each article can be processed cleanly.

4. Sentiment Analysis – HTTP POST to Azure Function

- Sends combined **title** + **snippet** to a custom **Azure Function** that uses the **VADER lexicon**.
- Returns **sentiment** (positive/negative/neutral) and a **score**.
- Output merged with original article data using a **Merge node** (Keeps input + adds sentiment/score).

5. Date Normalization – Function Node

- Converts the raw article date into the required format (**YYYY-MM-DD HH:mm:ss**).
- Ensures consistency for Airtable and Google Sheets logging.

6. Branching Logic – IF Nodes

- **IF Negative:** Send Slack alert with article title, link, and sentiment.

- **IF Positive:** Store in Airtable “Testimonials” base for future marketing use.
 - **All Mentions (Positive, Negative, Neutral):** Logged into Google Sheets with title, snippet, sentiment, date, and link.
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Tools Required

- **n8n (Cloud or Self-Hosted)** – Workflow automation platform.
 - **SerpApi** – To fetch Google News results.
 - **Slack** – For team notifications.
 - **Airtable** – For saving positive mentions.
 - **Google Sheets** – For centralized logging.
 - **Azure Functions** – For advanced sentiment analysis using VADER.
 - **VADER Lexicon (**vader-sentiment** NPM package)** – Sentiment scoring library used inside Azure Function.
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Size of Project

- **Medium (3–6 tasks)**
 - Scheduler → Fetch Articles → Sentiment Analysis → Date Parse → Slack/Airtable/Sheets
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Setup Requirements

1. **SerpApi** – Get API key from serpapi.com.

2. **Slack** – Add Bot/App, get OAuth token, invite bot to target channel.
 3. **Airtable** – Get API key and Base ID from account settings + table URL.
 4. **Google Sheets** – Share sheet with service account connected to n8n.
 5. **Azure Function** –
 - Deploy Node.js function with `vader-sentiment` installed.
 - Function accepts JSON `{ "text": "your text" }`.
 - Returns `{ "sentiment": "positive|negative|neutral", "score": number }`.
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Deployment Time Estimate

- **Base setup (no customizations):** 3–4 hours.
 - **With custom keyword lists, Slack approval flows, or Airtable schema changes:** 1–2 days.
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Value Proposition

- **Time savings:** Automates continuous monitoring that would take hours of manual searching per week.
- **Faster crisis response:** Teams can react to negative mentions in real time.
- **Marketing asset generation:** Positive mentions saved directly into Airtable for reuse.
- **Data-driven PR:** Central log in Google Sheets for trend analysis and reporting.

Estimated savings: **10+ hours per month** for a PR/marketing team.

Known Limitations

1. **Lexicon Bias (VADER)** – Words may be misinterpreted out of context (e.g., “empty” is treated as negative even in neutral contexts like “*empty buildings converted to data centers*”).
 2. **No deep context understanding** – Sarcasm, irony, or subtle tones are not captured.
 3. **Rate Limits** – SerpApi and Slack have request/usage limits that may require paid plans.
 4. **Article Data Variability** – Some articles may not provide a snippet, leading to analysis on title only.
 5. **Azure Dependency** – Workflow depends on availability of your Azure Function. If offline, sentiment classification fails.
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Testimonials / Use Cases

- **Internal Testing:** Confirmed alerts for injected negative keywords (“scam”, “fraud”) arrive in Slack within seconds.
 - **Positive Mentions:** Successfully logged into Airtable as testimonials for marketing teams.
 - **Centralized Log:** Google Sheets received all mentions (neutral, positive, negative) for easy export.
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Size Classification

Medium Project – 5 core steps plus integrations.

Estimated ROI

Example:

- Saves ~10 hours/month of manual PR scanning.
 - PR manager hourly cost: \$50.
 - Savings: ~\$500/month.
 - Tooling costs: ~\$50/month (SerpApi + Airtable + Slack if paid).
 - **Net ROI: ~\$450/month.**
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Version & Updates

- **v1.0** – Initial release with keyword-based sentiment logic.
- **v1.1** – Integrated Azure Function (VADER) for advanced sentiment scoring.
- **v1.2** – Added Merge nodes to preserve article metadata + sentiment together.
- **v1.3** – Enhanced Date Parse formatting to match Airtable requirements.