

TikTok Ad-Scrape System (Handover Manual & Walkthrough)

This document provides a comprehensive overview and user guide for the TikTok Ad-Scrape System. It is designed to assist marketing agencies in competitive analysis and strategy by automating the scraping, analysis, and organization of TikTok ad data.

1. System Overview

This system automates the process of scraping TikTok ads from the TikTok Ad Library, extracting ad content and metadata, and enriching the data with AI analysis. The extracted information, including the business name of the author, estimated target audience, estimated impressions, and published date for the ad, is stored in Airtable for structured access. It is designed to help companies understand competitor ad campaigns.

The system is built using **n8n** workflows, **Apify** actors, and **Airtable** as the database and user interface.

2. Core Components

- **Airtable Base**
 - **Tables:** Ad-Search Request, Scraped Ads.
 - Acts as both the input queue for search requests and the storage for scraped ad data and AI-driven insights.
 - **Apify Actors**
 - TikTok Ad Scraper: Scrapes ads and metadata based on keywords and filters.
 - **n8n Workflow**
 - Orchestrates the scraping and enrichment processes.
 - Runs on demand via a webhook trigger.
 - **AI Modules**
 - **Content Analysis:** Analyzes ad images and videos to identify **key insights**, **visual hooks** (reasons for being a scroll stopper), and **undeniable proof**. Based on these insights, the LLM generates the **strengths**, **improvement points**, and **lessons learned** for the ad.
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3. Workflow Flowchart

Airtable Ad-Search Request submitted via form →

n8n webhook triggers →

n8n picks request from Airtable →

Apify TikTok Ad Scraper fetches ads →

Ads stored in Scraped Ads table →

(User can then toggle on analysis) →

AI analyzes ad content for images and videos →

Results are available in Airtable for review.

4. Airtable Tables

4.1 Ad-Search Request (tblr3HLhJ7r8gDUcS)

- **Fields:** Search Description, Keywords, Max Results, Country, Date Range, run, Search Status, Search Started, Search Completed, Created By, Rec ID.
- **Role:** Serves as the input queue where users submit requests for ad scraping.

4.2 Scraped Ads (tblUHVsiaSLwxYroK)

- **Fields:** ID, Keyword, User, Region, Estimated Audience Size, Estimated Impression, Publish Date, Ad URL, Video URL, Image URL, analyze, Key Insights, Visual Hook, Undeniable Proof.
 - **Role:** Stores all scraped ad metadata and the results of the AI content analysis.
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5. API & Authentication

- **Airtable API:** REST + JSON.
 - **Auth:** Bearer Token.
 - **Apify API:** REST + JSON.
 - **Auth:** API Token.
 - **LLM APIs (e.g., Gemini, GPT):** REST + JSON.
 - **Auth:** API Key.
 - All APIs use standard HTTP codes for error handling.
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6. Limitations & Error Handling

6.1 System Limitations

- **AI-Generated Data:** All AI analysis is produced by LLMs (e.g., GPT/Gemini). Outputs may not always be contextually accurate, so **human review is mandatory**.
- **Dependency on Scraping Platform (Apify):** The data quality, completeness, and accuracy of other parameters like geo-location proxies and dates are handled by Apify's scrapers. The automation process has no control over these.
- **Execution Limitations:** Only one webhook can be executed at one time, so only one operation can be performed per execution. Execution operations are restricted to **Search content** and **Analyze content**.
- **Keyword Search:** The TikTok Ad Library's API searches for keywords and account usernames using the same endpoint. This means a search for "nike" will return ads from accounts with "nike" in their name as well as ads with the keyword "nike" in their content.
- **Limited Country Selection:** The system can only select from a limited number of countries that the TikTok Ad Library is available for.
- **Limited Ad Metrics:** The ad library does not provide metrics like likes, views, share count, or bookmarks. Therefore, there is no calculation for a "virality score" for ads.
- **No Comments Analysis:** The TikTok Ad Library does not provide a comments section for ads, so this system does not include comments analysis.
- **Limited Metadata:** Other than the actual video content, the ad library provides limited information. Sometimes metadata like the business name, account name, estimated audience, and published date may also be missing for some records.
- **Video Analysis Latency:** Video analysis is dependent on the Gemini LLM, which can be slow and may be overcrowded. Although wait nodes are used to enforce delays, if generation takes longer, please wait. If no results are produced, try again after some time.
- **Keyword vs. Hashtag Input:** The ad library scraper takes keyword and hashtag input as the same. For example, a search for "Nike" is the same as searching for "#Nike".

6.2 Error Handling

- **2xx:** Success.
 - **4xx:** User errors (e.g., invalid request, missing fields).
 - **5xx:** Server errors (retry logic in n8n is recommended).
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7. Scoring Formula

- **Note:** This system does not include a virality scoring formula, as it is designed for ad scraping, which focuses on impression and audience size data rather than organic virality.
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8. AI Prompts (for OpenAI or Similar LLM)

- **Ad Analysis Prompt:** "You are given a TikTok ad's description and content. Analyze the ad to identify the key insights, its visual hook (what makes it a scroll stopper), and any undeniable proof."
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9. n8n Workflow Structure

- **Trigger Node:** Webhooks.
 - **Airtable Nodes:** Fetch search requests, update status, and save results.
 - **Apify Nodes:** Run the TikTok Ad Scraper.
 - **Gemini/OpenAI Nodes:** Analyze content.
 - **HTTP Request Node:** Used for communication between nodes and external services.
 - **Wait Node:** Used to enforce delays, particularly for LLM analysis.
 - **Filter Node:** Used to check conditions before processing.
 - **Region Coding Node:** This is a custom node to handle region-based requests, as seen in the workflow.
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10. Maintenance Checklist

- Rotate Airtable and Apify tokens regularly.
 - Monitor Apify actor changes (API updates may break scrapers).
 - Review n8n logs weekly for failed runs.
 - Clear old requests from the Ad-Search Request table monthly.
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11. Troubleshooting

- **No ads scraped?** Check if the Apify actor quota has expired or if the keywords are too niche.
 - **No AI analysis output?** Check the n8n execution log for errors. The LLM may be busy; try again later.
 - **Rate limit errors?** Add a Wait node in n8n between Airtable writes.
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12. Future Improvements

- Integrate with data visualization tools (e.g., Google Data Studio) for campaign performance dashboards.

- Expand analysis to include competitor spending estimates.
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13. Appendix

- **n8n Workflow JSON (full export):**
<https://dgtlbase.app.n8n.cloud/workflow/hZ12tQGGIP18DgIc>
- **Screenshots of Airtable schema (tables, fields):**
<https://airtable.com/appOvITlq2sffZrah/api/docs>
- **Prompt library for all AI modules:** See Section 8 and the n8n workflow.

Sample JS snippets for webhook automation within Airtable:

JavaScript

```
let table = base.getTable("Ad-Search Request");
let record = await table.selectRecordAsync(recordId);

await fetch("YOUR_N8N_WEBHOOK_URL_HERE", {
  method: "POST",
  headers: { "Content-Type": "application/json" },
  body: JSON.stringify(record)
});

console.log("Sent to n8n:", record);
```

User Guide - Detailed Walkthrough

This guide provides a step-by-step walkthrough for team members on how to use the system.

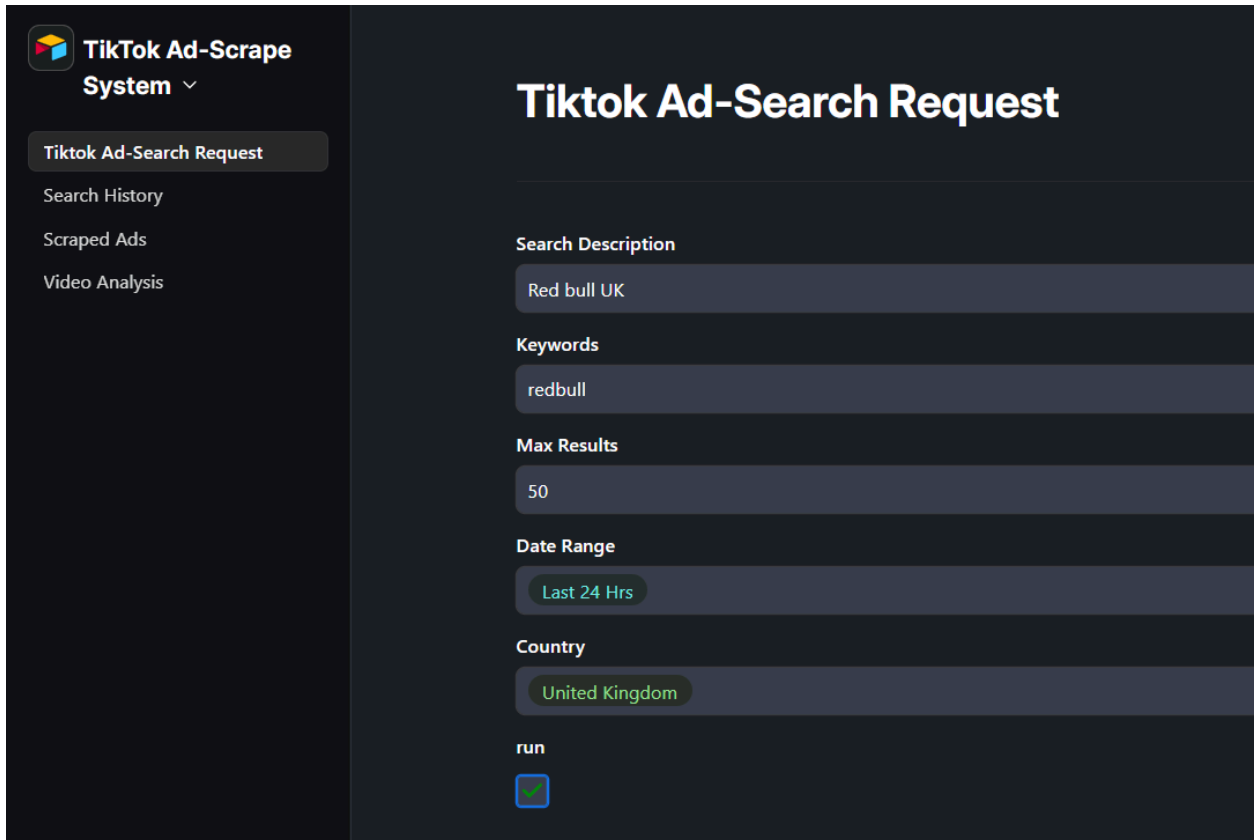
A - Access and Roles

- **Who needs access:** 1) Marketing editors (Airtable Editor), 2) Ops engineer (n8n access), 3) Data reviewer (Airtable Viewer+comments).
- **Action:** Confirm access before running searches. Ensure required Airtable permissions are set.

B - Create an Ad Search (step-by-step)

1. Open the **Ad-Search Request form** interface in Airtable.
2. Populate fields:
 - **Search Description:** "Ad-hoc search for new campaign"
 - **Keywords:** "Redbull"
 - **Max Results:** 50

- **Country:** "United Kingdom"
 - **Date Range:** "Last 24 Hours"
 - **run:** TRUE
3. Save the record.
- **Tips:**
 - Since keywords and usernames are not distinguished, a broad keyword might return results from both.
 - The **run** checkbox must be checked for the webhook to trigger the workflow.



The screenshot shows the 'TikTok Ad-Scrape System' interface. On the left is a sidebar with a logo and a dropdown menu. The main area is titled 'Tiktok Ad-Search Request' and contains several input fields and a checkbox.

TikTok Ad-Scrape System ▾

- Tiktok Ad-Search Request
- Search History
- Scraped Ads
- Video Analysis

Tiktok Ad-Search Request

Search Description

Red bull UK

Keywords

redbull

Max Results

50

Date Range

Last 24 Hrs

Country

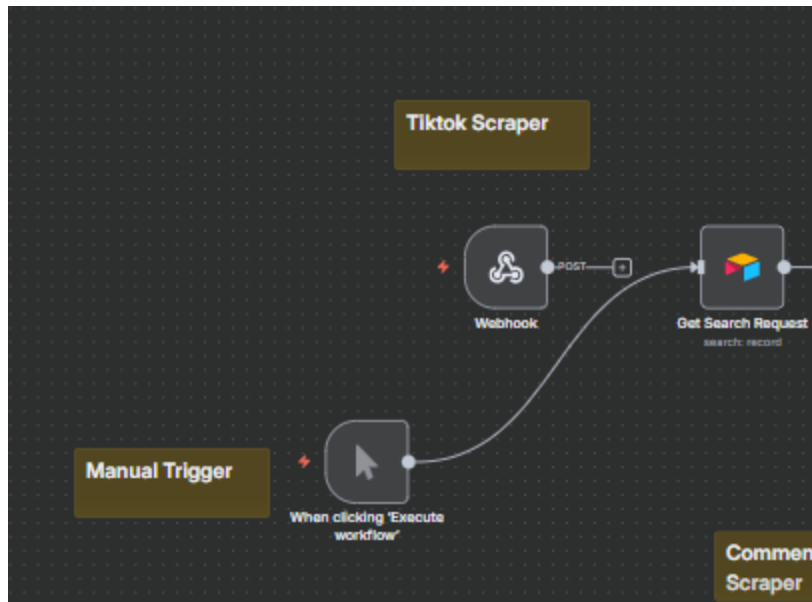
United Kingdom

run

☒

C - Run the Workflow (manual)

- If you need to force a run, open the **n8n workflow**.
- Click **Execute Workflow** or trigger the webhook (if configured).
- **Action:** Observe the execution status in n8n to ensure it is running correctly.



Personal / Scrapers Pack / Tiktok Ads Scraper - V2 + Add tag Active Share Saved

Editor Executions Evaluations

Executions No active executions ⓘ

☒ Auto refresh ⌵

- Aug 30, 06:43:48 Succeeded in 483ms
- Aug 30, 06:42:29 Succeeded in 475ms
- Aug 30, 06:39:32 Error in 6.558s ↻
- Aug 30, 06:36:03 Succeeded in 45.685s
- Aug 26, 20:29:38 Succeeded in 2m 2.44s
- Aug 26, 20:26:44 Succeeded in 42.428s

Aug 30, 06:43:48 Succeeded in 483ms | ID#6200

The diagram shows a workflow for a 'Tiktok Ad Analyzer'. It starts with a 'Webhook' node connected to a 'Get Search Request' node (labeled 'search: record'). The workflow then branches into two paths based on an 'If' condition. The top path, labeled 'Tiktok Scraper', includes nodes for 'Convert Date and Time', 'Region Coding', 'Apply Ad-Scraper' (labeled 'POST: https://api.tiktok.com/v1/...'), 'Create a record', and 'Update Status' (labeled 'update: record'). The bottom path, labeled 'Tiktok Ad Analyzer', includes nodes for 'Download Ad-Video', 'Upload Video' (labeled 'POST: https://api.tiktok.com/v1/...'), 'Wait', 'Download Ad Image', 'Analyze Image' (labeled 'Analyze Image'), and 'Output Image Summary' (labeled 'Message Model').

E - Review Scraped Ads

1. Open the **Scraped Ads** table or the **Scraped Ads** interface in Airtable.
2. Open a record to confirm the data: **User**, **Estimated Audience Size**, **Estimated Impression**, **Ad URL**, etc.
3. Look for the **analyze** toggle.

- **Reviewer tips:**
 - If a field is blank, it means that metadata was not provided by the TikTok Ad Library for that record.

F - Request Analysis

- Toggle **analyze** to **TRUE** on a record to trigger the analysis.
- **Action:** Monitor n8n runs for AI processing completion.
- **Timing guidance:** LLM jobs may be queued; expect variable completion times depending on server load.

ID	Keyword	User	Region	Ad URL	Publish Date	analyze
1839708720922802	Nike	NIKE Retail B.V.	NL	https://library.tiktok.com/...	2025-08-11 8:00am	✓
1839708724208657	Nike	NIKE Retail B.V.	NL	https://library.tiktok.com/...	2025-08-11 8:00am	✓
1839708687437857	Nike	—	NL	https://library.tiktok.com/...	2025-08-11 8:00am	✓
1839708604858497	Nike	NIKE Retail B.V.	NL	https://library.tiktok.com/...	2025-08-11 8:00am	✓
1840808568923186	Nike	Badge Direct B.V.	NL	https://library.tiktok.com/...	2025-08-19 8:00am	✓
1839708429677618	Nike	—	NL	https://library.tiktok.com/...	2025-08-12 8:00am	✓
1839708671632385	Nike	NIKE Retail B.V.	NL	https://library.tiktok.com/...	2025-08-11 8:00am	✓
1839708767231025	Nike	NIKE Retail B.V.	NL	https://library.tiktok.com/...	2025-08-11 8:00am	✓
1839708685330450	Nike	—	NL	https://library.tiktok.com/...	2025-08-11 8:00am	✓

G - Interpret AI Outputs and Take Action

- **Key fields produced by AI:**
 - **Key Insights:** Summary of the ad's value.
 - **Visual Hook:** What makes the ad a "scroll stopper."
 - **Undeniable Proof:** Credible elements of the ad.
 - **Post Review (Strengths/Improvements):** Insights and lessons learned from the ad.
- **Suggested next steps based on outputs:**
 - **Strong Visual Hook:** Use these as inspiration for new ad creatives.
 - **Identified Strengths:** Learn from successful competitor strategies.
 - **Identified Weaknesses/Improvements:** Avoid similar mistakes in your own campaigns.

Analysis			1839708429677618	
User	Region	Key Insights	Keyword	Nike
—	NL	The video ad presents a full Nike athleisure outfit for women, prominently ...	User	—
—	NL	The ad spotlights a model dressed head-to-toe in Nike Tech gear, set against a ...	Region	NL
—	NL	A stylish individual showcases a matching pink Nike tracksuit, prominently...	Estimated Impression	10K-100K
—	NL	This TikTok ad showcases a modern, relaxed women's tracksuit, featuring wide-le...	Publish Date	2025-08-12 8:00am
—	NL	A lone motorcyclist, fully equipped in protective gear, stands beside their bike on...	Ad URL	https://library.tiktok.com/ads/detail/?ad_id=1839708429677618
—	NL	The video presents a silver Honda NC700 motorcycle, beginning with wide, ...	Key Insights	The ad spotlights a model dressed head-to-toe in Nike Tech gear, set against a minimal background to emphasize the sleek black and gray color scheme. Text overlays like 'HERENBROEKEN' and 'NIKE TECH' reinforce product focus. The Nike logo is front and center, signaling authenticity and style, while the neon-accented sneakers add a pop of color that draws attention.
10pastcu...	Ireland	The video begins with a	Visual Hook	Immediate focus on the bold Nike logo and sharp contrast between the black/gray outfit and neon green sneaker accents.
			Undeniable Proof	Prominent display of the Nike brand across apparel and footwear, leveraging Nike's established reputation for quality and trendsetting athletic wear.
			Theme	Modern Athletic Confidence

H - Exporting / Sharing

TikTok Ad-Scrape System		TikTok Agency · Video Analysis					1839708429677618	
Tiktok Ad-Search Request	Search History	ID	Keyword	User	Region	Key Insights		
		1839708687437857	Nike	—	NL	The video ad presents a full Nike athleisure outfit for		

I - Reviewer QA Checklist (short)

- AI-generated insights are accurate to the ad content.
- Factual claims are supported by "Undeniable Proof."