

Instagram Ad-Scrape System (Handover Manual & Walkthrough)

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

1. System Overview

This system automates the process of scraping Instagram ads from the Meta Ad Library, extracting ad content and metadata, and enriching the data with AI analysis. The extracted information, including the user profile of the author, number of followers, region, ad URL, and captions, is stored in **Airtable** for structured access. It is designed to help companies understand competitor ad campaigns and perform R&D based on public perception.

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**
 - Instagram 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 content (video, photo, or text) 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 Instagram 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, Followers, Page Category, Page Verification, Publish Date, Display Format, CTA, Caption, Ad URL, Video URL, Image URL, analyze, Key Insights, Visual Hook, Undeniable Proof, Theme.
 - **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 quality of the scraped data, 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**, **Analyze video**, and **Analyze content**.
- **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".
- **Limited Country Selection:** The system can only select from a limited number of countries that the Meta 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 Meta Ad Library does not provide a comments section for ads, so this system does not include comments analysis.
- **Limited Metadata:** Other than the actual content (video, image, or text), the ad library provides limited information. Sometimes metadata like the business page username, followers, published date, and captions may also be missing for some records.
- **Video and Image Analysis Latency:** Video and image 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.

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 available data from the Ad Library rather than organic virality.
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8. AI Prompts (for OpenAI or Similar LLM)

- **Ad Analysis Prompt:** "You are given a Facebook 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. Based on these insights, analyze the ad and generate a few bullet points about its strengths, improvement points, and lessons learned."

9. n8n Workflow Structure

- **Trigger Node:** Webhooks.
 - **Airtable Nodes:** Fetch search requests, update status, and save results.
 - **Apify Nodes:** Run the Instagram 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.
 - **Extract Photo Video URL Node:** A custom node to handle and extract the appropriate media URL.
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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.

13. Appendix

- **n8n Workflow JSON (full export):**
<https://dgtlbase.app.n8n.cloud/workflow/4k4mIRP1YjE76JZr>
- **Airtable Schema (tables, fields):** <https://airtable.com/appYKIEPy4cenMQ1N/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:** 10
 - **Country:** "United Kingdom"
 - **Date Range:** "Last 7 Days"
 - **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.

Instagram Ad-Search Request

Search Description

Keywords

Max Results

50

Date Range

Country

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.

D - 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**, **Followers**, **Page Category**, **Publish Date**, **Caption**, **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 Meta Ad Library for that record.

Instagram Ad Agency > Scraped Ads				
ID	Keyword	User	Region	Ad URL
23895125460140346	cetaphil	qhdistribution	Netherlands	https://www.facebook.co...
779081897895168	cetaphil	etos	Netherlands	https://www.facebook.co...
1452098926035160	cetaphil	etos	Netherlands	https://www.facebook.co...
1296621761828896	cetaphil	_ishikaghosh	Netherlands	https://www.facebook.co...
2906632002858364	cetaphil	etos	Netherlands	https://www.facebook.co...
807313812455347	cetaphil	plein.nl	Netherlands	https://www.facebook.co...
1282342626448759	cetaphil	etos	Netherlands	https://www.facebook.co...

E - 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.

Scraped Ads							Group	Filter	Sort	Q	...
Region	Ad URL	Caption	Display Format	Page Category	Publish Date						analyze
Belgium	https://www.facebook.co...	STRENGTH STARTS HERE....	VIDEO	Unternehmen für Outdoor...	2025-08-21	1:00pm					✓
Belgium	https://www.facebook.co...	Meine Tochter wurde...	IMAGE	Women's Clothing	2025-08-21	1:00pm					✓
Belgium	https://www.facebook.co...	Des sneakers de seconde...	CAROUSEL	Clothing (Brand)	2025-08-21	1:00pm					✓
Belgium	https://www.facebook.co...	DUKE NUKEM - 3D...	CAROUSEL	Profile	2025-08-21	1:00pm					✓
Belgium	https://www.facebook.co...	{{product.brand}}	DCO	—	2025-08-21	1:00pm					✓
Belgium	https://www.facebook.co...	500+ FASHION DESIGN...	VIDEO	Design & Fashion	2025-08-21	1:00pm					✓
Belgium	https://www.facebook.co...	WEEKEND DEAL 🍷 Tot...	IMAGE	—	2025-08-21	1:00pm					✓

F - 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.

Video Analysis				1311502100679249	
Keyword	User	Ad URL	Region	Keyword	Nike
cetaphil	qhdistribution	https://www.facebook.co...	Nethe	User	kikztrek
cetaphil	etos	https://www.facebook.co...	Nethe	Region	Belgium
travisscottjo...	skywalkbr	https://www.facebook.co...	World	Page Verification	NOT_VERIFIED
Nike	kickandrush.sh...	https://www.facebook.co...	Belgiu	Publish Date	2025-08-29 1:00pm
Nike	kikztrek	https://www.facebook.co...	Belgiu	Ad URL	https://www.facebook.com/ads/library/?id=1311502100679249
				Key Insights	The video presents a high-value, limited-edition Nike Air Force 1 sneaker (Off-White MCA) on foot, rotating to highlight its unique design features from multiple angles. It directly prompts viewer engagement by asking them to "Rate This Sneaker 1-10," fostering community interaction around shared passion for sneaker culture. The upbeat music and backdrop of other collectible shoes reinforce an aspirational lifestyle.
				Visual Hook	The immediate, dynamic close-up of the vibrant blue Off-White Air Force 1 on a moving foot, with its distinctive red zip tie and "AIR" branding, instantly captures attention by presenting a rare and visually striking item.
				Undeniable Proof	The detailed, 360-degree visual presentation of the shoe, showcasing authentic Off-White collaboration elements like the reflective deconstructed swoosh, the prominent "AIR" text on the midsole, and the signature red zip tie. This precise exhibition verifies the sneaker's authenticity and high-end status.

G - Exporting / Sharing

Instagram Ad-Scrape System

Data

Automations

Interfaces

Forms

Ad-Search Request

Scraped Ads

+

Add or import

+

Create new...

Q

Find a view

All Videos

Comments Analysis

Video Analysis

18

19

20

21

22

23

24

25

26

27

28

29

+

Share Instagram Ad-Scrape System

This base is shared with 3 collaborators.

In

Base

All records

View

29 records

Sharing is restricted for all bases in this workspace. [Manage settings](#)

Email invite

Share publicly

Invite by email...

Creator

Invite

☒ Notify people

☐ Invite to DGTlbase workspace

Get user groups on the Business plan

Upgrade to the Business plan to create and manage groups of users with which you can easily share bases, workspaces, and interfaces.

Manage access