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How I Turn N8N and Google Gemini Into My Personal AI Assistant

Step-by-step setup, powerful workflows, and tips to make N8N + Google Gemini handle your tasks like a real assistant.

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Amit Kumar

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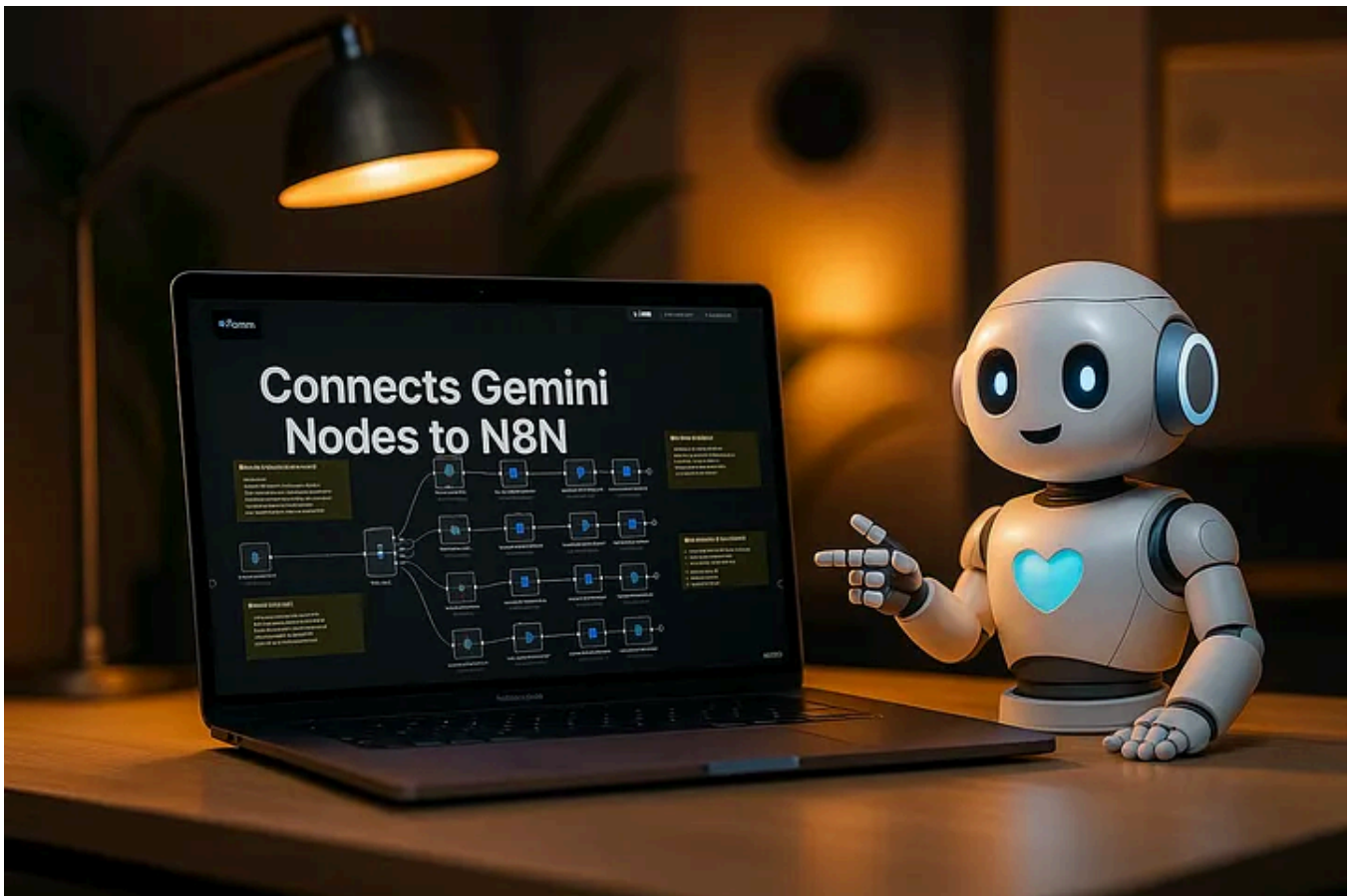
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Google Gemini just dropped inside N8N, and it's packed with features that make handling videos, PDFs, images, and audio super simple. But if you've never set it up, the first step can feel confusing. Today, I'll walk you through a **beginner-friendly, foolproof setup** so you can start using Gemini immediately — no guesswork.

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Step 1: Update N8N

First things first: make sure your N8N instance is **up to date**.

Why? Gemini nodes only appear after updating.

How to do it:

1. Open the N8N admin console (left sidebar).
2. Click the cloud icon → **Manage**.
3. Select the **latest N8N version** → Save.
4. Wait 1–2 minutes for N8N to reboot.

After this, when you search for “Gemini” in your workflow, you'll see the nodes ready to use.

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Step 2: Add a Gemini Node

Now that N8N is updated:

screenshot By Author

1. Search for “Gemini” in your workflow.
2. Click on the node you want to add → add it to your workflow.
3. Click the **pen icon** to set up your credentials.
4. You’ll see two fields: **Host** and **API Key** (API Key will be empty for now).

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Step 3: Create a Google Cloud Project

Before generating an API key, you need a Google Cloud project:

1. Go to [Google Cloud Console](#).
2. Click **New Project**.
3. Name it something simple like `N8N Gemini`.
4. No need to configure OAuth or additional settings — just create it.

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Step 4: Generate an API Key

Next, grab your API key:

1. Go to [Google AI Studio API Keys](#).
2. Refresh if your project doesn't appear immediately.
3. Select your project → **Create API Key**.
4. Copy the generated key.

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Step 5: Add API Key to N8N

Back in N8N:

1. Paste the API key into the **API Key field** of the Gemini node.
2. Click **Save**.

Boom! Your Gemini credentials are now active.

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Step 6: Using Gemini Nodes

Here's what you can do with Gemini inside N8N:

- **Generate Video Node:**
 - Choose model (V3 or 2.5 Pro) → input prompt → generate video.
- **PDF Extractor Node:**
 - Input a PDF → outputs the text.
- Optional JSON output example:

```
{
  "title": "Service Agreement",
  "date": "2025-08-01",
  "parties": ["Company A", "Company B"],
```

```
"summary": "This is a contract for..."
}
```

- **Image Analyzer Node:**
 - Input an image → outputs description or analysis.
- **Video Analyzer Node:**
 - Input a video → outputs analysis.
- **Audio Transcriber Node:**
 - Input audio → outputs transcription.

Tip: You can prompt these nodes for more specific answers, like “Describe this image in detail” or “Summarize this audio in one sentence.”

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Step 7: Optional — Use the Model Selector Node

This is the coolest part: assign different models to different inputs.

1. Add a **Model Selector Node**.
2. Define shortcuts (e.g., `#G` for Gemini, `#O` for OpenAI).
3. Input starting with a shortcut will automatically use the assigned model.

Example workflow:

- Input: `#G Hello!` → uses Gemini 2.5 Pro
- Input: `#O Hello!` → uses OpenAI

This allows your agent to switch between models automatically without creating multiple workflows.

AI Agent Integration

Gemini can act as the brain of your AI agent in N8N. Combine it with memory nodes to retain context and structure:

Screenshot By Author

- System Message → Instructions for the task
- User Message → Input document, text, or audio
- Assistant Message → Desired output format (JSON, text, table)

Examples:

- Summarize calls automatically.
- Extract structured info from contracts into a JSON object.
- Automate repetitive business tasks like email drafting, reporting, or content generation.

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Quick Tips for Beginners

- Start with **one node at a time**: video or PDF extraction first.
- Use **clear, descriptive prompts** for better outputs.
- For structured outputs, JSON is your friend — define the fields you need.'

2. Use Cases

Now that you know the nodes, let's explore how you can actually use them.

1. Video Generation:

- Gemini can create videos directly inside N8N using V2 or V3 models.
- Imagine automating social media clips, product demos, or quick educational videos without leaving your workflow.

2. Image Analysis:

- Upload an image and ask Gemini questions like:
- “What objects do you see?”
- “Describe the style and mood.”
- “How can I improve this for social media?”
- Perfect for content creators and marketers who want fast feedback.

3. Image Generation + Captioning:

- Not only generate images, but also auto-generate captions for Instagram, Twitter, or LinkedIn.
- This reduces the tedious process of brainstorming captions or visual ideas.

4. PDF Analysis:

- Feed Gemini contracts, invoices, or research papers and ask anything from “Summarize this” to “What are the key obligations in this contract?”
- Saves hours manually reading documents.

5. Audio Analysis:

- Transcribe meetings, summarize sales calls, or highlight action items.
- Example: Upload a sales call audio → Gemini transcribes → provides a one-sentence summary.

6. Large Language Model Queries:

- Ask any question, summarize websites, or extract structured insights.
- You can even chain multiple queries for deeper analysis, like summarizing a document and then generating action items from it.

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Monetization / Business Value Tips

Gemini is a tool, but it's also a **time and money saver**:

- **Automate Business Workflows:** Calls, client onboarding, content generation
- **AI Agency Setup:** Offer automation services using Gemini + N8N
- **ROI Examples:**
 - Save hours → handle more clients
 - Accurate insights → better decision-making
 - Faster content → more engagement

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Final Note

After this setup, you'll be able to:

- Generate videos, images, and analyze files natively.
- Transcribe audio files without third-party tools.
- Route tasks to different models automatically.

This guide is designed so you **can set up Gemini in N8N by yourself**, step by step. Once you're comfortable, you can start building more complex workflows like AI agents that handle multiple tasks automatically.

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N8n

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Responses (1)



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What are your thoughts?



Edgar P he/him
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Great article, Kumar.

Can you write an article as follow up to this? I think the “natural” sequence to this is how to put a frontend to these use cases. One use case - one follow up story here in Medium.




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