

# Day44\_Project\_AI\_Agent\_With\_n8n\_and\_Gemini

July 13, 2025

## My First AI Agent Project (n8n + Gemini + Real-Time Tools)

### 1 Objective

Today, I am building my **first AI Agent** using the no-code automation tool **n8n**, connected to **Gemini AI**, with real-time tools like **Calculator** and **Shark API**, and displayed via a simple **Chat UI** built using HTML + JavaScript.

### 2 What is n8n?

**n8n** is a powerful open-source workflow automation tool that allows you to connect various apps and services using visual workflows – like Zapier, but fully customizable.

#### 2.1 Key Features:

- Drag-and-drop workflow builder
- Supports HTTP requests, APIs, Webhooks
- Powerful trigger + logic system
- Easy integration with AI models, APIs, databases, and more
- Visit: <https://n8n.io>

### 3 Tools Used

Tool	Purpose
n8n	Workflow automation and backend logic
Gemini API	AI model to respond to queries
Calculator	Handle real-time math operations
Shark API	Connect to real-time external data
HTML	Create the front-end chat interface

## 4 Steps I Followed

### 4.1 Logged into n8n

- Used <https://n8n.cloud>
- Started a new **workflow**

### 4.2 Imported Chat Agent Template

- Used the **Import Chat Agent** feature
- Pre-built logic to receive, process, and respond to chat queries

### 4.3 Connected to Gemini AI

- Used Gemini API credentials
- Created API Key and configured HTTP Request node in n8n

### 4.4 Added Real-Time Tools

- **Calculator Node** to perform instant calculations (e.g., 17% of 2999)
- **Shark API Node** to fetch live data from external source
- **Memory Node** to retain chat history context

### 4.5 Tested the Workflow

- Asked queries like “What is 17% of 2999?” → Response was correct
- Tested logic branching, data formatting, and context memory

### 4.6 Built Frontend Chat UI

- Designed simple HTML + JavaScript chat interface
- Connected it to the webhook via `fetch()`
- Typed message → Clicked “Ask” → Got real-time AI reply

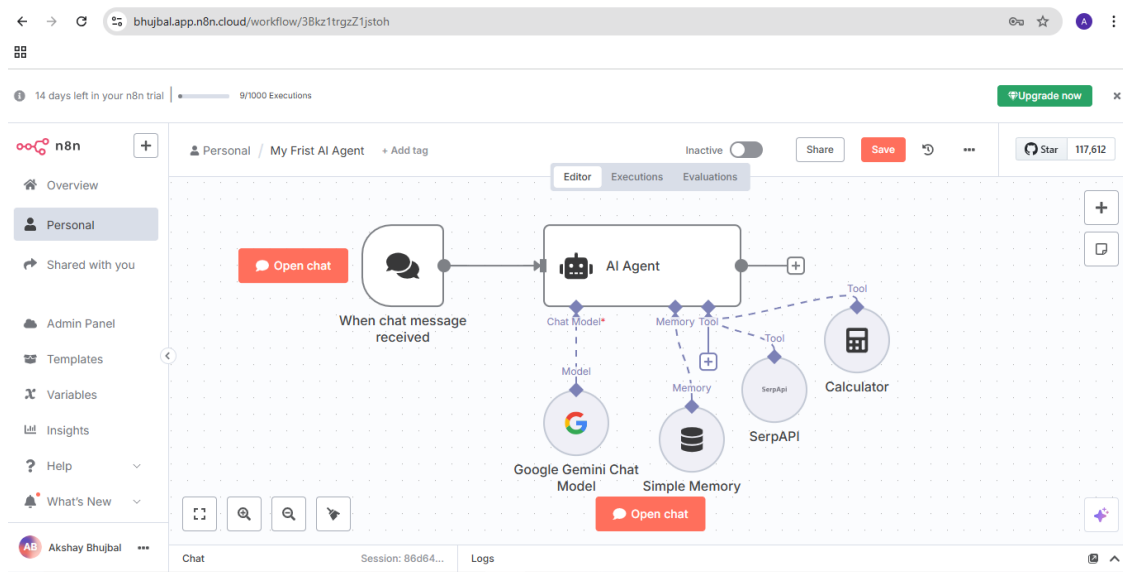
## 5 Webhook Link (Temporary)

Live Page Link: <https://bhujbal.app.n8n.cloud/webhook/d18e6a82-edc1-4185-a10d-f3fc550dbdce/chat>

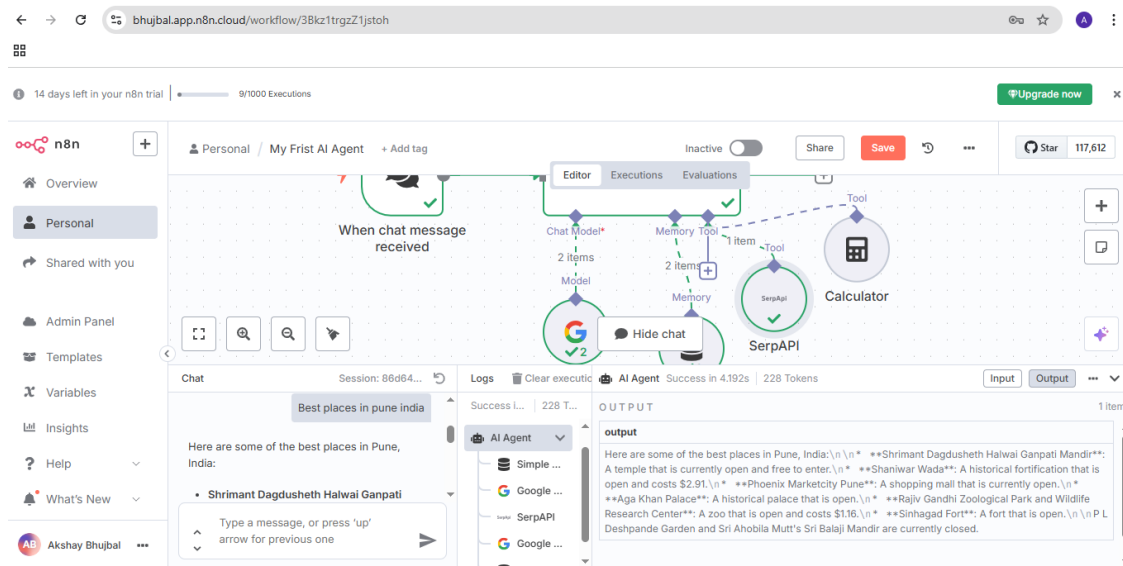
**Note:** I am using a free n8n plan. This link will stop working after some time. However, every part of this project is fully documented here for future use or deployment.

## 6 Screenshots

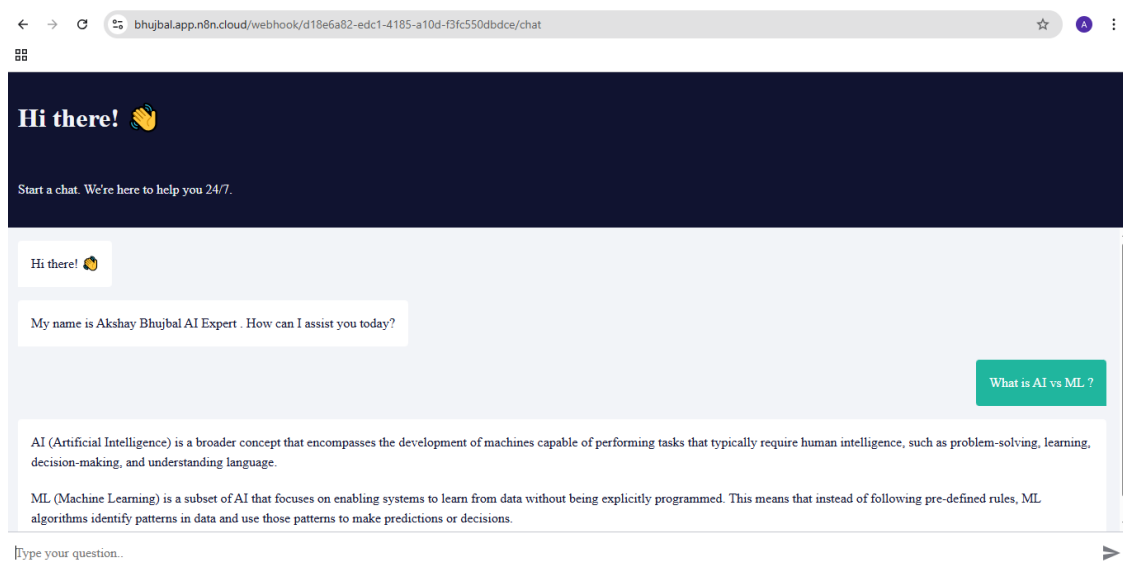
### 6.1 Agent Setup in n8n



### 6.2 Agent Responding in Workflow



## 7 Agent Working in Browser (Chat UI)



## 8 Conclusion

In this project, I successfully built my **first AI Agent** using **n8n**, connected to **Gemini AI**, enhanced with **real-time tools**, and deployed through a **simple Chat UI**.

This hands-on experience gave me practical insights into:

- Workflow automation with no-code tools like **n8n**
- API integration (Gemini, Calculator, Shark API)
- Building responsive AI agents with memory and logic
- Connecting frontend (HTML) to backend workflows

**Note:** The live agent link may stop working due to free plan limitations. However, this notebook fully documents the project for future deployment and reference.

### What I Learned

- Using **n8n** for real-time chat automation
- Working with **APIs and external tools** in workflows
- Designing a **simple chatbot UI** with JavaScript
- Keeping context with memory nodes in AI workflows

### Next Steps

- Deploy on a **custom domain** (e.g., **akshayagent.com**)
- Use **Gemini Pro** or **OpenAI GPT-4** for better performance
- Add **voice support** and **response history tracking**
- Expand to multi-agent systems with user login and analytics

Thanks to the **n8n bootcamp** which helped me start my AI agent journey. This project is just the beginning – I'm excited to explore more possibilities in automation, AI, and real-time data interaction.