

# n8n AI Agent Masterclass

AI Nodes Made Simple

# n8n AI Agent Masterclass

## ← AI Nodes

Select an AI Node to add to your workflow

Q Search nodes...



### AI Templates Recommended

See what's possible and get started 5x faster →



### AI Agent

Generates an action plan and executes it. Can use external tools.

## TEXT ACTIONS



Message a



Classify te

## AUDIO ACTIONS



Generate a



Transcribe



Translate a

## AI Agent

Parameters Settings

Tip: Get a feel for agents with our quick [tutorial](#)

### Agent

Tools Agent

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Utilizes structured tool schemas for precise ar  
Recommended for complex tasks requiring ac  
with models that support tool calling.

### Conversational Agent

Describes tools in the system prompt and par  
but potentially less reliable than the Tools Age  
models not supporting structured schemas.

### OpenAI Functions Agent

Leverages OpenAI's function calling capabilitie  
for tasks requiring structured outputs when w

### Plan and Execute Agent

## AI Agent

Parameters Settings

Test step

Docs

Always Output Data



Execute Once



Retry On Fail



On Error

Stop Workflow

Notes

Display Note in Flow?



nodes

## IMAGE ACTIONS

Add Option

ary Images



Message an assistant



Update an assistant

# What are AI Agents?

An employee who...

Has perfect memory

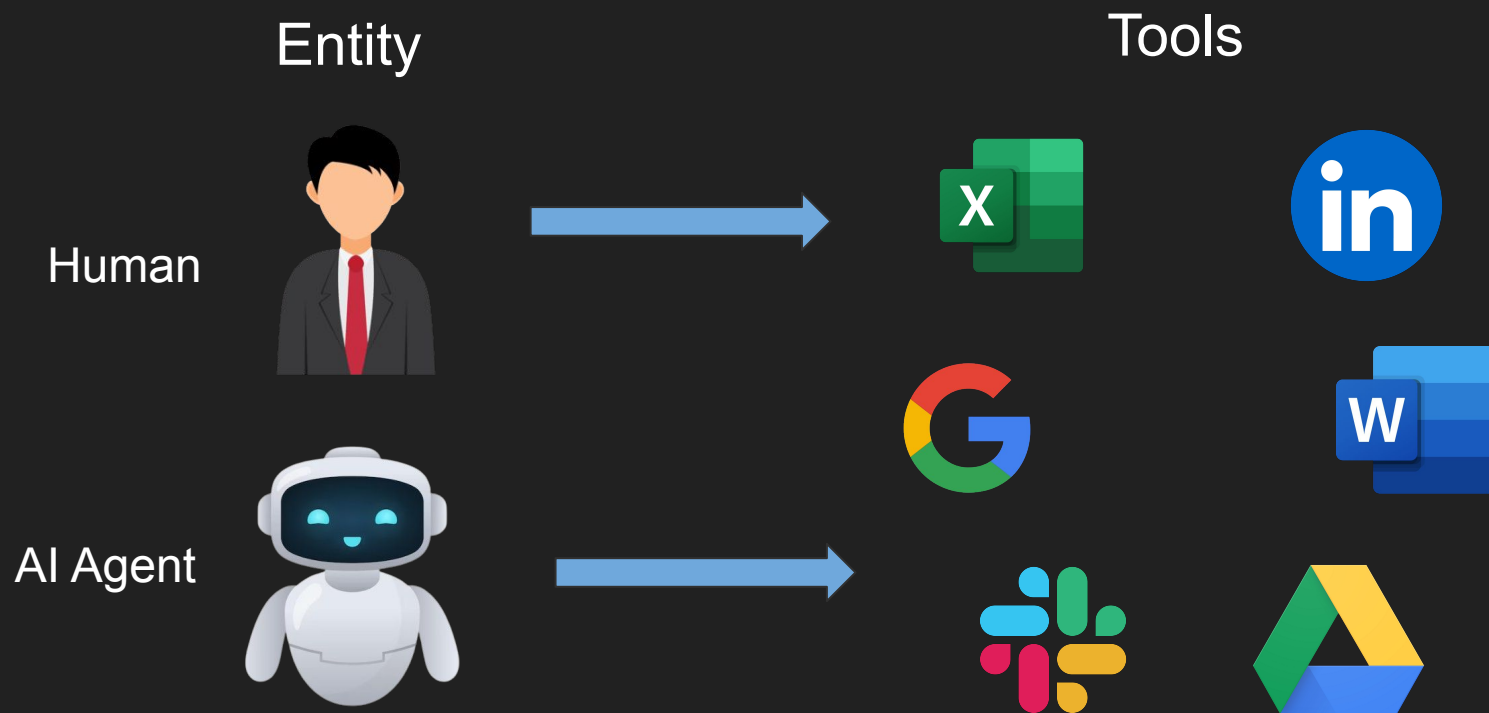
Follows exact instructions

Never sleeps

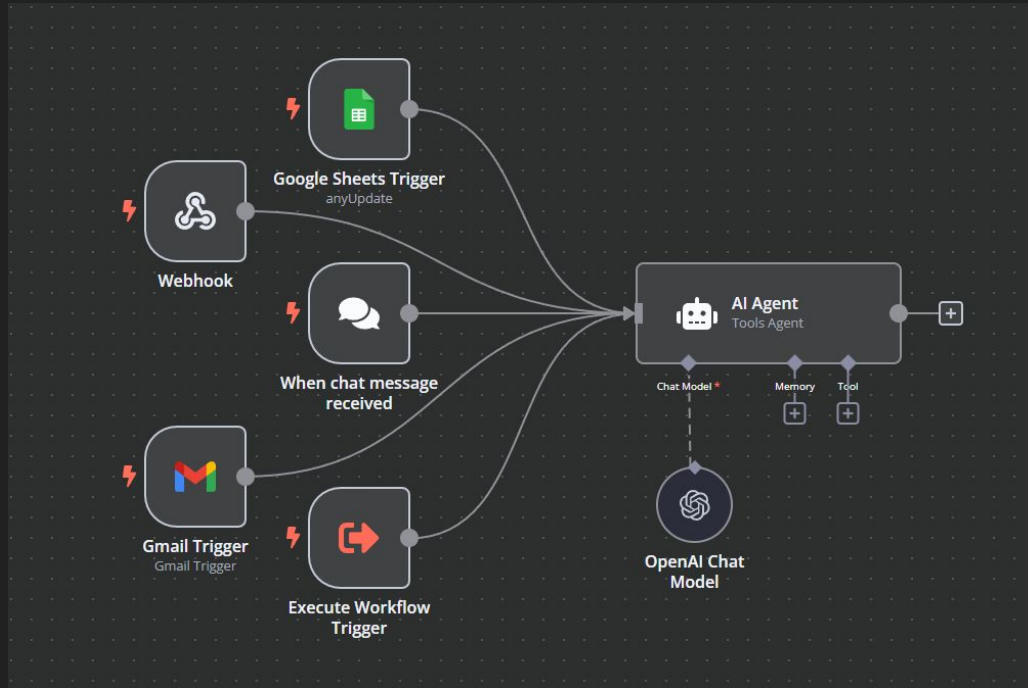
Costs a fraction of hiring a human

Etc.

# How Do AI Agents Work?




# Setting Up an AI Agent Workflow



\*free\*

skool

# Types of AI Agents

 AI Agent

[Parameters](#) [Settings](#) [Docs](#)

Tip: Get a feel for agents with our quick [tutorial](#) or see an [example](#) of how this node works

Agent

Tools Agent

**Tools Agent**

Utilizes structured tool schemas for precise and reliable tool selection and execution. Recommended for complex tasks requiring accurate and consistent tool usage, but only usable with models that support tool calling.

**Conversational Agent**

Describes tools in the system prompt and parses JSON responses for tool calls. More flexible but potentially less reliable than the Tools Agent. Suitable for simpler interactions or with models not supporting structured schemas.

**OpenAI Functions Agent**

Leverages OpenAI's function calling capabilities to precisely select and execute tools. Excellent for tasks requiring structured outputs when working with OpenAI models.

**Plan and Execute Agent**



## AI Agent

Generates an action plan and executes it. Can use external tools.

# Types of AI Agents

Tools

ReAct

Conversational

SQL

Plan and Execute

OpenAI Functions

# Tools Agent

## What

- Can use external tools to perform specific actions
- E.g., Calculators, HTTP requests, other AI Agents

## When

- When you need an AI Agent to access other applications or perform actions that go beyond conversation

## Example

- Receive user's input > look up information from web API > send an email



# Conversational Agent

## What

- Designed for human-like conversations
- Maintains context over multiple interactions (Chatbot)

## When

- Engage in a back-and-forth conversation with users

## Example

- Customer support bot that can answer questions, keep track of context, and respond appropriately with memory

# Plan and Execute Agent

## What

- Handling complex tasks that need to be broken down into steps
- Plans out what needs to be done, then takes it step by step

## When

- Complex task that requires multiple actions or phases
- Each step to be executed in a structured sequence

## Example

- An agent that helps with project planning, where it breaks down a task (like organizing an event) into individual steps to execute in order

# Other AI Agents

## ReAct

- Tasks that require reasoning based on logic rather than conversation history

## SQL

- Interfaces with SQL databases
- Translates natural language requests into SQL queries

## OpenAI Functions

- Leverages OpenAI's function calling capabilities, allowing the agent to select tools based on task requirements

# JavaScript Variables within AI Agents

## Schema

```
A  name  Andrew Smith
A  email  andrewsmith@gmail.com
#  age   32
```

## JSON

```
[
  {
    "name": "Andrew Smith",
    "email": "andrewsmith@gmail.com",
    "age": 32
  }
]
```

# JavaScript Variables within AI Agents

A name Andrew Smith

A email andrewsmith@gmail.com

Text

*fx* `{{ $json.name }}`

Result

Andrew Smith

Text

*fx* `{{ $json.email }}`

Result

andrewsmith@gmail.com

# JavaScript Functions within AI Agents

```
Text
fx {{ $now }}
Result
[DateTime: 2024-11-02T19:28:12.369-06:00]
```

```
Text
fx {{ $now.format('yyyy-MM-dd')}}
Result
2024-11-02
```

```
{{ $if() }}
```

**\$if(condition, valueIfTrue, valueIfFalse)**

Returns one of two values depending on the condition. Similar to the ? operator in JavaScript.

```
// Return "Good day" if time is before 5p
m, otherwise "Good evening"
$if($now.hour < 17, "Good day", "Good even
ing")
```

## PARAMETERS

**condition (boolean):** The check to make. Should evaluate to either true or false

**valueIfTrue (any):** The value to return if the

# Output Parsers

## Auto-fixing

- Automatically adjusts the output
- Use when you need flexibility but still want reliable formatting

## Item List

- Separates the output into individual items
- Use when you're expecting a list and want each item handled separately

## Structured Output Parser

- Forces the output to follow a strict JSON structure that you define
- When you need a specific JSON format

# Other AI Nodes

OpenAI

LLM Chain

Information Extractor

Q&A Chain

Sentiment Analysis

Summarization Chain

Text Classifier



# Other AI Nodes

## OpenAI

- Connects to OpenAI's models to generate text, analyze images, create audio, etc. based on your instructions

## LLM Chain

- Provides a simple, streamlined way to send a prompt to a LLM for a response

## Information Extractor

- Pulls specific pieces of information from a block of text and organizes it into a structured format

# Other AI Nodes

## Q&A Chain

- Uses AI to answer questions based on a knowledge base rather than general internet knowledge

## Sentiment Analysis

- Analyzes the emotion or tone of a piece of text, categorizing it as positive, negative, or neutral

# Other AI Nodes

## Summarization Chain

- Condenses long pieces of text into shorter summaries, capturing the main points

## Text Classifier

- Categorizes pieces of text into predefined categories based on its content

# Thank You!

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