

Day 1- Seesion 4 -Building Custom GPTs & Agentic Workflows

Custom GPTs let you personalize language models for specific tasks or personalities. **Agentic workflows** take this further — enabling GPTs to **act autonomously**, perform multi-step tasks, use tools, and even make decisions.

This is a practical guide to both concepts — from no-code setups to full programming-level customization.

□ PART 1: Building Custom GPTs

□ What is a “Custom GPT”?

A **Custom GPT** is a version of ChatGPT tailored for a **specific role, domain, or personality**, created using:

- A **custom prompt** (called *Instructions*)
- Optional **uploaded files**
- Optional **API calls or actions**
- Optional **memory**

Think of it like creating your own AI assistant, expert, or teacher — no coding required.

□ How to Build One (via ChatGPT UI)

Tools needed: ChatGPT Plus (Pro version for advanced models)

Steps:

1. Go to chat.openai.com/gpts
2. Click "**Create a GPT**"
3. Use the **GPT Builder interface**
4. Fill in:
 - **Instructions** (e.g., "You are a chemistry tutor who answers in a fun, visual way.")
 - **Personality & Behavior**
 - **Knowledge files** (e.g., upload PDFs, docs, data)
 - **APIs / Actions** (optional, requires OpenAPI schema)

Use Cases:

- Industry-specific assistant (e.g., legal, medical)

- Interactive tutor or mentor
- Brand voice chatbot
- Data summarizer or analyzer
- Internal tools automation bot

▣ Advanced Custom GPTs with Tools

You can plug in:

- **APIs** using OpenAPI schemas
- **Files** (PDFs, CSVs, docs, etc.)
- **Custom logic** via function calling (for devs)

▣ PART 2: Agentic Workflows

▣ What is an Agentic Workflow?

An **AI agent** goes beyond answering a prompt — it:

- Has a **goal**
- Breaks it into **subtasks**
- Uses **tools** or external services
- **Thinks, remembers, and iterates**
- May even **talk to other agents**

This is the foundation of **autonomous AI systems**.

▣ Tools for Agentic Workflows

Tool / Framework	Description	Level
LangChain	Python/JS library for building chains and agents	Developer
AutoGen (Microsoft)	Multi-agent workflows + tool use	Advanced
OpenAI Functions	Give GPTs API access to take actions	Intermediate
CrewAI	Teams of collaborative AI agents	Developer
Open Agents (OpenAI)	Experimental framework for planning + tool use (2025+)	Advanced
AgentLite	Lightweight agent building toolkit	Developer

Tool / Framework	Description	Level
ChatGPT Custom GPTs	No-code agents with tools	Beginner

□ What Can Agents Do?

Task	Example
Web Research	Search the web, summarize results
Multi-step Automation	Analyze a doc → extract info → send to spreadsheet
Customer Support	Talk to users, search documentation, and reply
Coding	Plan project → write code → test → deploy
Data Analysis	Load dataset → run stats → plot graphs
Toolchains	Call APIs, run shell commands, interact with UI (e.g., via RPA)

□ Example: Agent Workflow (LangChain or OpenAI)

1. **Goal:** "Create a weekly report from website data."
2. Agent steps:
 - Call a web scraping tool
 - Parse the data
 - Generate insights
 - Format into Markdown or PDF
 - Email it via API
3. **With Custom GPTs:**
 - You could build a GPT that reads reports, answers questions, and summarizes them for different audiences.

□ Want to Build One?

Here's what you can do right now:

□ No-code:

- Use **Custom GPT Builder** inside ChatGPT (Plus)
- Add instructions, files, and optional APIs

□□ Low-code / Dev:

- Use **LangChain** + **OpenAI API**
- Try **AutoGen** for multi-agent collaboration
- Use **OpenAI Function Calling** to give GPT access to tools

❑ Tips for Production Use

Consideration	Why it matters
Security	Limit file/API access; use scoped tokens
Latency	Agents can be slow — optimize steps
Cost	API usage adds up in multi-step workflows
Debugging	Use logs, visual chains (LangSmith, ReAct traces)
Evaluation	Test output reliability before scaling

❑ Summary

Feature	Custom GPT	Agentic Workflow
Purpose	Tailored chat assistant	Task-solving autonomous system
Skill needed	None–Low	Medium–High
Uses	Support, Q&A, summarization	Research, automation, multi-step tasks
Tooling	ChatGPT Builder, APIs	LangChain, AutoGen, CrewAI, OpenAI API