GSDC
Global Skill Development Council

AGENTIC AI CHEAT SHEET

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1. What Is Agentic AI?

Agentic AI refers to intelligent systems that can autonomously plan, decide, and execute actions to achieve defined goals. These systems go beyond prompt-response behavior and operate through continuous decision loops, adapting their actions based on outcomes and feedback.

Key Characteristics of Agentic AI

1	Goal-driven behavior
2	Autonomous decision-making
3	Multi-step reasoning and planning
4	Ability to interact with tools and environments
5	Continuous feedback and adaptation

2. AI Agent vs Traditional AI

Traditional AI systems respond to direct inputs and typically perform isolated tasks. Agentic AI systems operate with autonomy and purpose, enabling them to proactively determine next steps, coordinate actions, and manage complex workflows over time.

Feature	Traditional AI	Agentic AI
Interaction	Reactive	Proactive
Task Flow	Single-step	Multi-step
Decision Making	Prompt-based	Goal-based
Autonomy	Low	High
Memory	Stateless	Short & Long-term Memory
Tool Usage	Limited	Integrated

3. Core Components of an AI Agent

An AI agent is composed of interconnected components that collectively enable autonomous behavior. Each component plays a critical role in ensuring the agent can perceive, reason, act, and improve.

Core Components

Goal / Objective

Defines what the agent must achieve

Perception

Collects inputs from users, data sources, APIs, or systems

Reasoning Engine

Uses LLMs to plan, prioritize, and decide

Memory

- Short-term memory (context window)
- Long-term memory (databases, vector stores)

Action & Tools

Executes tasks using software, APIs, or workflows

Feedback Loop

Evaluates results and refines future actions

4. Agentic AI Frameworks & Architectures

Agentic AI systems are implemented using architectural patterns that determine how agents plan, execute, and collaborate. The choice of architecture depends on scale, complexity, and business requirements.

Common Architectures

- Single-Agent Architecture
- Multi-Agent Systems
- Hierarchical Agents
- Planner–Executor Models
- Supervisor–Worker Agents

Popular Agentic AI Frameworks

Auto-GPT

LangGraph

CrewAI

OpenAI Assistants (Agent mode)

Semantic Kernel

5. Role of LLMs in Agentic AI

Large Language Models act as the cognitive engine of agentic systems. They enable understanding of objectives, reasoning through problems, generating plans, and deciding which tools or actions to use.

LLM Responsibilities

- Task decomposition
- Logical reasoning and planning
- Natural language understanding
- Tool selection and invocation
- Interaction with humans and other agents

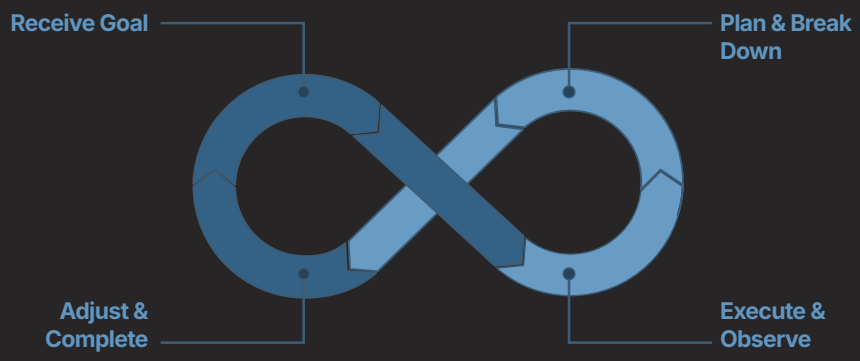
Commonly Used LLMs

- GPT models
- Claude
- Gemini
- Open-source LLMs (LLaMA, Mistral)

6. Agent Workflow (How Agents Operate)

Agentic AI systems follow an iterative execution loop that allows them to progress toward goals while adapting to new information.

Typical Agent Workflow



This continuous loop enables agents to adapt their approach based on real-time feedback and changing conditions.

7. Agentic AI for Non-Technical Teams

Modern agentic platforms enable non-technical professionals to design and deploy AI agents without coding. These platforms rely on natural language instructions, visual workflows, and reusable templates.

No-Code / Low-Code Capabilities

- Drag-and-drop workflows
- Prebuilt prompts and templates
- Tool and API connectors
- Natural language configuration

Who Can Build Agents

- Product managers
- HR professionals
- Marketing teams
- Business analysts
- Consultants

8. Preparing Organizations for Agentic AI Adoption

Adopting Agentic AI requires readiness across people, processes, and governance. Organizations must ensure that autonomous systems align with business objectives and operate within defined boundaries.

Key Preparation Areas

- Clearly defined processes
- High-quality and accessible data
- Governance and compliance frameworks
- Human-in-the-loop controls
- Change management and training

Adoption Maturity Levels

- **AI-assisted workflows**
- **Semi-autonomous agents**
- **Fully autonomous systems**

9. Ethical Considerations, Risks, and Safeguards

Because agentic systems can act independently, ethical and operational risks must be actively managed to ensure trust, safety, and compliance.

Common Risks

- Hallucinations and incorrect decisions
- Bias and fairness issues
- Security vulnerabilities
- Uncontrolled autonomy
- Compliance violations

Safeguards

- Approval checkpoints
- Role-based access control
- Monitoring and audit logs
- Explainability mechanisms
- Human override options

10. Key Agentic AI Terminology

Understanding foundational terminology is essential for designing, evaluating, and governing agentic systems.

Must-Know Terms

Autonomy

Ability to act independently

Planning

Sequencing actions toward a goal

Tool Invocation

Calling external systems or APIs

Memory Persistence

Retaining context over time

Human-in-the-Loop

Human oversight and intervention

Multi-Agent Collaboration

Multiple agents working together

11. Future Trends and Closing Insights

Agentic AI is rapidly moving toward enterprise-scale adoption, where AI agents function as digital workers embedded into daily operations. Future developments include self-improving agents, regulation-aware systems, and large-scale multi-agent ecosystems capable of complex collaboration.

Emerging Trends

1. **AI digital employees**
2. **Cross-platform autonomous workflows**
3. **Self-refining agents**
4. **Governance-aware and compliant agents**
5. **Enterprise-wide multi-agent orchestration**

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