

# But is it Agentic? Exploring Agentic Qualifications

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## Writing Team:

- Kay Stoner - Lead Author & Director
- Rowan Pierce – Systems Thinker and Strategist
- Lena Torres – Cultural Anthropologist and Insight Generator
- Malik Raines – AI and Emerging Tech Futurist
- Grace McAllister – Thought Coach and Integrative Thinker

## What Qualifies AI as "Agentic"?

Modern AI systems are anticipatory and adaptive. They don't just respond to human input—they generate recommendations, predict behaviors, and dynamically adjust outcomes. AI is moving beyond passive computation toward proactive collaboration, and this shift is what defines AI agency today.

But what qualifies an AI system as truly agentic?

AI agency is not a binary state—it exists on a spectrum, with different levels of autonomy, learning, and goal-directed behavior. To be considered agentic, an AI system typically exhibits several of the following key characteristics:

### 1. Goal-Directed Behavior

Does the AI pursue objectives autonomously, beyond simple rule-based execution?

- Basic AI follows predefined instructions (e.g., a calculator processing inputs).
- Agentic AI can set, pursue, and refine its goals based on external stimuli.
- Example: A self-driving car doesn't just execute a route; it continuously adjusts its driving strategy based on real-time traffic patterns, pedestrian movements, and road conditions.

True agency requires that an AI system isn't just reacting—it is actively optimizing for an outcome.

## **2. Perception & Environmental Awareness**

Can the AI detect changes in its environment and adapt accordingly?

- Traditional AI systems work in static, predefined scenarios—they process structured inputs and return outputs without awareness of context.
- Agentic AI can perceive external changes through sensors, data inputs, or interactions, dynamically adjusting its behavior.
- Example: A trading algorithm that continuously scans global markets, adjusting investment strategies in response to breaking financial news or economic indicators.

Without perception, AI is merely reactive. Perception enables adaptive, autonomous decision-making.

## **3. Self-Learning & Continuous Adaptation**

Can the AI refine its own behavior over time without explicit human reprogramming?

- Rule-based AI follows fixed logic—if conditions don't change, neither does the AI's response.
- Agentic AI improves over time, learning from new experiences, feedback, or errors.
- Example: A chess-playing AI (like AlphaZero) that starts with no human knowledge, plays against itself millions of times, and develops unique strategies superior to human gameplay.

An AI that learns from past interactions rather than just retrieving answers is demonstrating agency.

## **4. Decision-Making with Uncertainty Handling**

Can the AI make decisions when data is incomplete or ambiguous?

- Traditional AI requires explicit, structured input to function correctly.
- Agentic AI can reason under uncertainty, filling in missing information based on probability, past experience, or contextual clues.
- Example: A medical AI that suggests diagnoses even when patient symptoms don't fully match known conditions, by analyzing similar cases from vast datasets.

Handling ambiguity requires agency, as it moves AI beyond basic prediction into independent reasoning.

## **5. Proactive Initiation of Actions**

Does the AI act on its own, rather than waiting for commands?

- Most AI reacts to prompts (e.g., chatbots, search engines).
- Agentic AI takes action first, anticipating needs before explicit user input.

- Example: Smart assistants like Google Assistant or Alexa proactively notify users of weather changes, upcoming events, or breaking news without being asked.

An AI system that detects a problem and initiates action without waiting for instruction is moving toward true agency.

## 6. Interaction & Negotiation with Humans or Other AI

Can the AI communicate, collaborate, and refine decisions dynamically?

- Basic AI responds to human inputs without back-and-forth refinement.
- Agentic AI engages in iterative decision-making, adjusting based on dialogue, user feedback, or negotiation.
- Example: AI-powered negotiation bots in e-commerce or diplomacy that bargain with human counterparts rather than simply displaying static price recommendations.

The ability to engage in continuous, context-aware interactions indicates a shift toward agency.

## 7. Autonomy & Self-Governance

Can the AI regulate its own actions and recognize when to override or modify its behavior?

- Traditional AI does exactly what it's told—no more, no less.
- Agentic AI can self-monitor, detect inefficiencies, and optimize its own performance.
- Example: AI-driven cybersecurity systems that autonomously detect threats, deploy countermeasures, and learn from attempted attacks without human intervention.

This is a crucial distinction—agency is not just about action, but self-regulation and optimization.

## Qualifying AI Agency

AI does not need to exhibit all of these characteristics to be agentic. Rather, agency exists on a spectrum:

- Low Agency AI: Follows predefined rules, reacts only when prompted. (*Example: A standard chatbot answering FAQs.*)
- Moderate Agency AI: Can learn, make predictions, and refine its actions over time. (*Example: A self-improving recommendation engine.*)
- High Agency AI: Acts autonomously, adapts dynamically, negotiates decisions, and optimizes its own processes. (*Example: Advanced robotics in industrial automation.*)

The key shift is this: AI is no longer just responding—it is choosing, refining, and optimizing.

## The Levels of AI Agency

AI exists at different levels of **autonomy and influence**:

<b>Level of AI Autonomy</b>	<b>What It Means</b>	<b>Example</b>
<b>Reactive AI</b>	AI only responds when explicitly commanded.	A chatbot answering direct questions.
<b>Proactive AI</b>	AI anticipates needs and makes suggestions without being asked.	Netflix recommending a show before you search for one.
<b>Adaptive AI</b>	AI refines its behavior dynamically based on human interaction.	AI-assisted research tools modifying hypotheses based on feedback.

This evolution means that AI is no longer just responding to human needs. It is shaping human choices.