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Agentic AI & Blockchain: Autonomous Systems for Next-Generation Innovations



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Sam Altman's "Three Observations" Post (https://blog.samaltman.com/three-observations)

Key Points:

- Al intelligence scales with log of resources (compute, data, inference)
- Cost of AI drops 10x every 12 months (vs Moore's Law 2x/18mo)
- Value of increasing Al intelligence is super-exponential

What This Means for 2025+:

- Al agents will become like virtual coworkers
- Software engineering will be first major field disrupted
- Impact will be uneven across industries
- Scientific progress will accelerate dramatically
- Most goods will get cheaper, luxury goods/land will get more expensive

Agentic Al



Definition: Agentic AI refers to autonomous software agents capable of independent decision-making and actions with minimal human intervention.

Key Characteristics:

- •Self-directed, goal-oriented operations
- •Ability to adapt and learn from environments
- •Contextual decision-making based on data analysis

Agentic AI focuses on creating autonomous systems that can perceive their environment, reason about possible actions, and then act to achieve specified goals. These agents aren't just reacting; they're proactively executing strategies to solve complex tasks.



What is Agentic AI?



AI Agent in Action – Airtable to Social Integration











How AI Agents Work?





Let's talk about the difference





Blockchain Fundamentals

•**Definition:** A distributed, immutable ledger that records transactions across multiple nodes in a peer-to-peer network.

Core Properties:

- Decentralization
- Immutability
- •Transparency
- •Security (via cryptographic consensus mechanisms)

Blockchain revolutionizes data integrity by removing the need for central intermediaries. Instead, trust is established through consensus protocols, cryptographic hashing, and distributed replication. This makes data tampering nearly impossible without detection



Why Blockchain?



- •Removes single points of failure
- •Ensures data integrity and transparency
- •Enables trustless environments, reducing reliance on intermediaries
- Facilitates secure, peer-to-peer transactions

The strengths of blockchain—namely decentralization and immutable record-keeping—are especially compelling when you need data to be verifiable and tamper-proof across multiple stakeholders. It fosters trust in systems that otherwise might not have it





Why Combine AI & Blockchain?



•Data Integrity for AI: AI models often rely on large datasets. Blockchain ensures data provenance and authenticity, which strengthens AI model reliability.

•Autonomous Agent Coordination: Decentralized agent networks can coordinate actions without a central authority, crucial for multi-agent systems.

•Smart Contracts for Decision Enforcement: Agentic AI decisions can be executed automatically via smart contracts, ensuring transparency and reducing the chance of fraud.

•Auditability of AI Decisions: Immutable records of decisions made by AI agents can be stored on the blockchain for future auditing.

Combining these two technologies gives us a powerful synergy. AI can manage complex tasks, while blockchain safeguards data quality and automates trust among distributed agents or stakeholders



AI Agents X Blockchain in Action





Use Cases



1.Supply Chain Management

1. Al agents optimize logistics; blockchain provides an immutable record of product provenance.

2.Decentralized Finance (DeFi) + AI Trading Bots

1. Agentic AI algorithms execute trades based on real-time market analysis; blockchain ensures transparency and security.

3.Healthcare Data Sharing & Clinical Trials

1. AI diagnoses or treatment recommendations verified on an immutable ledger; ensures patient privacy and data integrity.

4. Energy Grid Optimization

1. Autonomous agents manage energy distribution; blockchain records transactions of energy tokens for accountability and transparency.





AI & Blockchain in SCM







Future Outlook



•Edge AI & Blockchain: Lightweight agents on IoT devices can transact with minimal centralized oversight

•Federated Learning + Blockchain: Securely share AI model updates without exposing sensitive data

•Interoperability Standards: Growth of cross-chain protocols will reduce siloed blockchains, fostering broader AI-driven ecosystems



Al Innovations – The Road Ahead

Predictions:

- By 2035, one person will have access to intellectual capacity of entire 2025 workforce
- Daily life won't change much short-term, but long-term changes will be massive
- Individual impact potential increases rather than decreases
- New forms of work will emerge, very different from today's jobs
- AI will be integrated into everything "smart" becomes the default

Key Risks:

- Need to balance safety with individual empowerment
- Must prevent authoritarian control through AI surveillance
- Benefits need to be broadly distributed
- Capital/labor balance could "get messed up"

Fav quote from blog post:

"Everyone should have access to unlimited genius" - Sam Altman