AI & Web3

The Next Frontier

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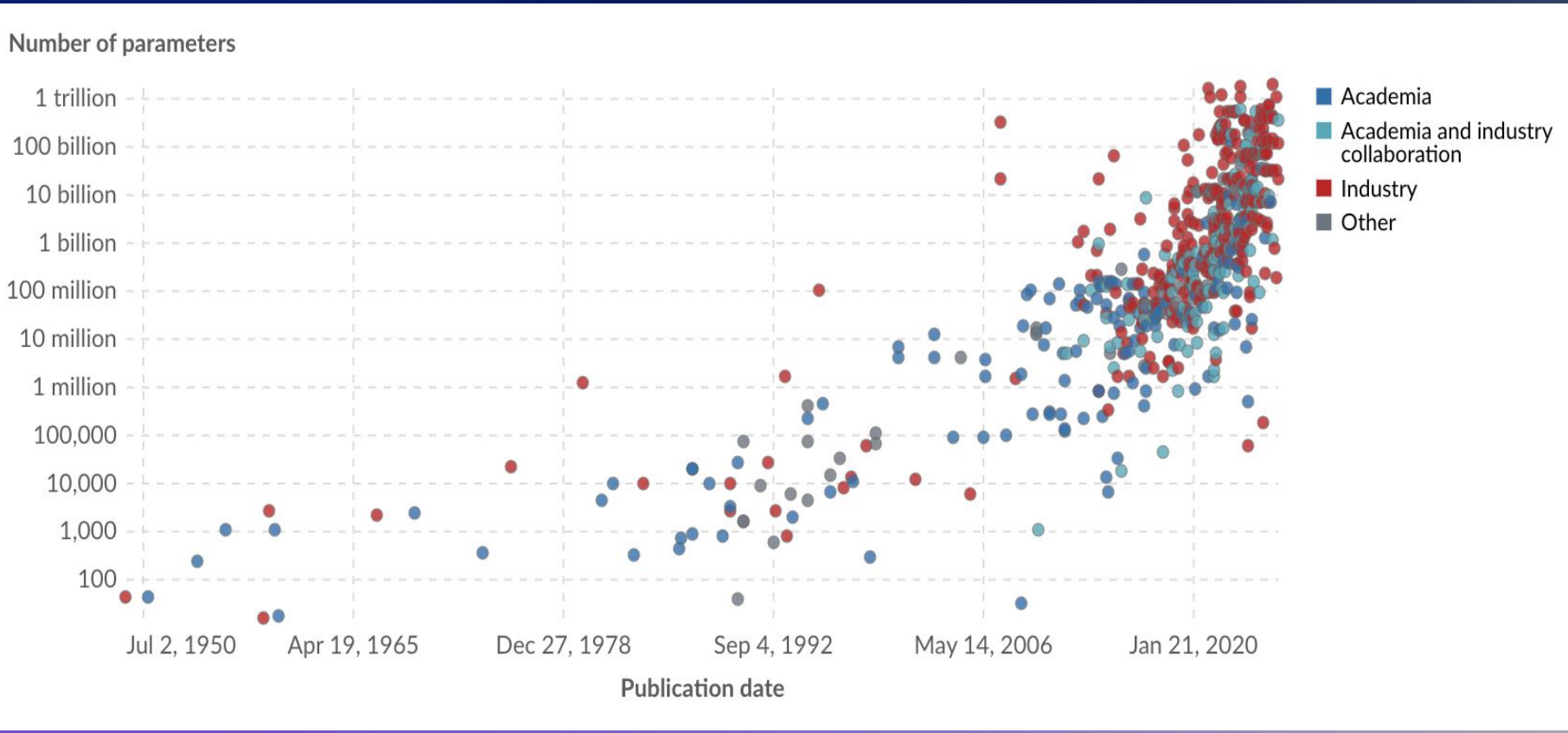
From Internet, to Mobile, to AI & Web3

2000s:
Intranets communicate, TCP/IP matured; commerce globalized

2010s:
Mobile smart phones introduced: GPS, camera, touch fueled app economy

2020s:
LLM UIs + Web3 enabled authentication & commerce, auditable AI


Number of parameters
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100 billion
10 billion
1 billion
100 million
10 million
1 million
100,000
10,000
1,000
100
Jul 2, 1950
Apr 19, 1965
Dec 27, 1978
Sep 4, 1992
May 14, 2006
Jan 21, 2020
Publication date
Academia
Academia and industry collaboration
Industry
Other

source

Rise of AI
Fall of Trust

- Deepfakes should make us all question every photo and/or video
- Industries face a fraud wave from AI-generated fakes
- We have to now assume all digital media is fake until proven real
- AI outputs now **require provenance** and authenticity by design

The Problems

- **Opaque Compute**: Black-box GPU/CPU cycles; no proof that models were trained or run as claimed.
- **Data Integrity Risks**: Training data and generated content is often unverifiable, unlicensed, or mutable, eroding confidence in outputs.
- **Agentic Identity**: No system of authenticity between AI models; Siloed solutions, no effective mass collaboration.
- **Centralized Bottlenecks**: Cloud service providers dictate cost, access, and availability of compute.

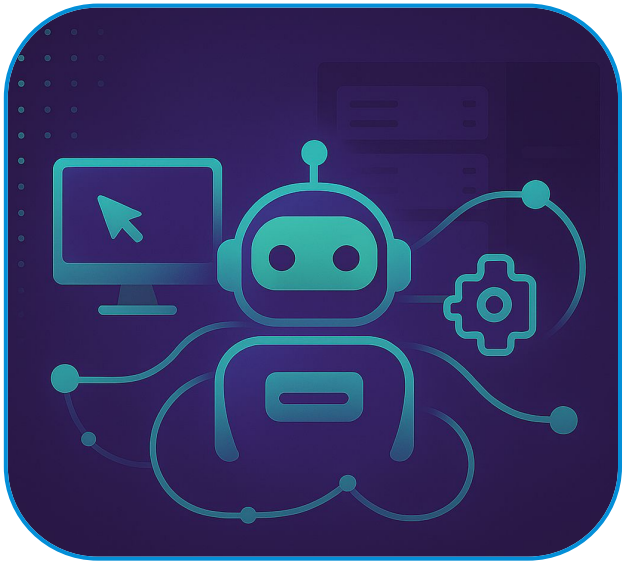
The Solution

Web3 introduces

- **Decentralized consensus**
- **Immutable ledgers**
- **Cryptographic proofs**
- **Tokenized incentives**

These are exactly the primitives needed to transform opaque AI infrastructure into **verifiable, auditable, and trustable AI**.

Web3 Pillars – Backend Trust & Agent Trust



Back-End Trust Layer

AI Agent Tooling

Backend Trust

Back-End Trust Layer

Verifiable Compute (EQTY Labs)
Hardware-attested runtime that stamps every GPU/CPU cycle with a cryptographic certificate and writes the hash to DLT, proving model provenance and regulatory compliance end-to-end.

GPU DePIN Marketplaces (io.net, Aethir, Akash)
Pools tens of thousands of idle or edge GPUs into a pay-as-you-go cloud—often 40-60 % cheaper than AWS—letting AI teams spin training clusters in minutes while providers earn native tokens.

Data Provenance & Licensing (Filecoin, HCS, etc)
Immutable storage + on-chain metadata that tracks dataset lineage, ensuring models are built on verifiable data streams

Decentralized Training Mesh (Bittensor)
Blockchain-incentivized network where subnets co-train and rank models; TAO rewards flow to contributors, creating an open “global brain” that scales compute and knowledge without gatekeepers.

Frontend Trust

AI Agent Tooling

AI Agent Kits
Open-source SDKs (TypeScript & Python) that wrap LangChain tools so LLM-powered agents can execute **DLT transactions**: enabling “ledger-native” bots.

MCP Servers
Reference gateways for Anthropic’s Model Context Protocol—HTTP services that expose tool APIs (file I/O, on-chain calls, web queries) in a uniform schema. Agents connect once and gain modular, permissioned access to external capabilities, like DLT transactions;

OpenConvAI / HCS-10 (Hedera / Hiero / Hashgraph)
On-chain communication standard where AI agents register in a Hedera topic, open fee-gated channels, and stream tamper-proof messages with ABFT ordering.

AITP (NEAR Protocol)
Open, agent-first standard for AI agents to discover peers, exchange structured JSON tasks, and settle fiat/crypto payments on NEAR or any chain. It supplies a secure handshake, permissioning, and extensible action schemas.

AI Agent Frameworks (eg. Rasa, ElizaOS)
A lightweight “agent operating system” that bundles wallet-safe key custody, multi-model orchestration, retrievable memory, and cross-platform connectors (Discord, X, Telegram).

AI + Web3 Standards

AI Standards Builders

W3C (World Wide Web Consortium)

- **AI Focus:** Decentralized identity & credentials (DIDs, Verifiable Credentials 2.0).
- **Why it matters:** Gives AI agents portable, cryptographically verifiable identities for trust across ecosystems.

NIST (US National Institute of Standards and Technology)

- **AI Focus:** AI Risk Management Framework + Generative AI profiles.
- **Why it matters:** Provides regulatory-grade governance guidelines adopted by governments and enterprises globally.

Hashgraph Online DAO (Hedera Ecosystem)

- **AI Focus:** AI + decentralized internet standards (HCS-2 agent registries, HCS-10 secure messaging, HCS-11 verifiable profiles).
- **Why it matters:** Pioneering decentralized, on-chain standards purpose-built for AI agents.

ISO/IEC (International Standards Organization)

- **AI Focus:** AI governance frameworks (ISO/IEC 42001 – AI management systems).
- **Why it matters:** Creates global, certifiable standards for AI lifecycle governance and compliance.

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Hedera: The Backbone of the Agentic Internet

Fairness & Security

ABFT and fair ordered messages with data hashes solve issues of task coordination and authenticity

Simplicity

Native services like HTS enable token creation and gating without needing complex solidity deployments.

Versatile

HCS enables decentralized discovery, communication, coordination (keys), monetization, and authenticity of data.

Consistency

Cheap, predictable fees are favored by AI as it can understand and calculate cost easily for any job.

The next wave of intelligent apps

will be built where verifiable data, deterministic economics, fair ordered - fast transactions, and sustainability intersect.

Thank You!

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