

Build Agents on NEAR AI

Robert Yan
NEAR Protocol

Agenda

1. **Protocol**
2. **Platform**
3. **Agents**

NEAR — The Blockchain for AI

Near
is home to
top consumer
apps in Web3



1.2M+

Monthly Active
Users



HOT

4M+

Monthly Active
Users



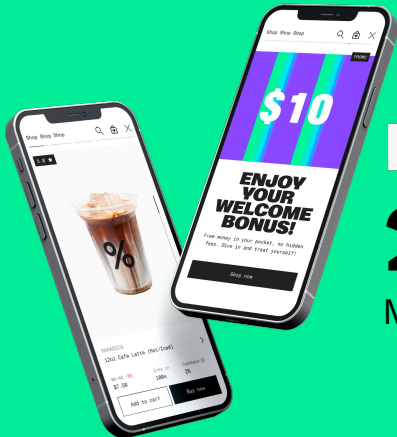
500k+

Monthly Active
Users

KAIKAI

25M+ +250% YTD

Monthly Active Users



The image features a black background with a repeating pattern of small green plus signs. A decorative border of stylized purple and blue flowers and green leaves is positioned around the edges. The text "Nightshade 2.0" is centered in a large, white, serif font. A small, stylized butterfly is located to the right of the text.

Nightshade 2.0

 near



USER -
OWNED

AI

near

User-Owned AI

AI optimized for users' wellbeing and economic success

- Users maintain full ownership of their data and assets
- Enables integrated, customized experiences for each user rather than monolithic corporate apps
- AI participates in global marketplaces on behalf of user
- Users, services, and researchers can all benefit



NEAR AI ECOSYSTEM MAP

Application Layer

Decentralized Finance



 Almanak  Sender  DeltaTrade  Shill GPT

Consumer Apps

 Questflow  Qstar Labs  Fi  AI PGF

Infrastructure & Model Layer



Decentralized Inference Providers

 Hyperbolic  Open Gradient  Hyperspace






Agent Frameworks

 Bitte  Olas  Jutsu


Edge Models

 Peri Labs  Crynux


Decentralized Compute Providers

 Exabits  Compute Labs  Bitmind  Gaib  Aethir

Foundational Models

 Pond  Pond  Silverstream



Agent Payment

 Nevermined

Data Monetization Networks

 Masa  Public AI  dFusion  Ringfence  Brainstems

Confidential Computing

 Nillion  Phala  Calimero

Data & Storage Layer


Data Indexing Platforms

 Kaito  Chainbase  Space & Time  ZettaBlock  Magic

Synthetic Data

 Mizu

Decentralized Storage

 OnMachina

Ecosystem Support Layer

Partner Accelerators

 Horizon  Delphi Labs  Betaworks

Research Community

 Edge  Atlas Computing

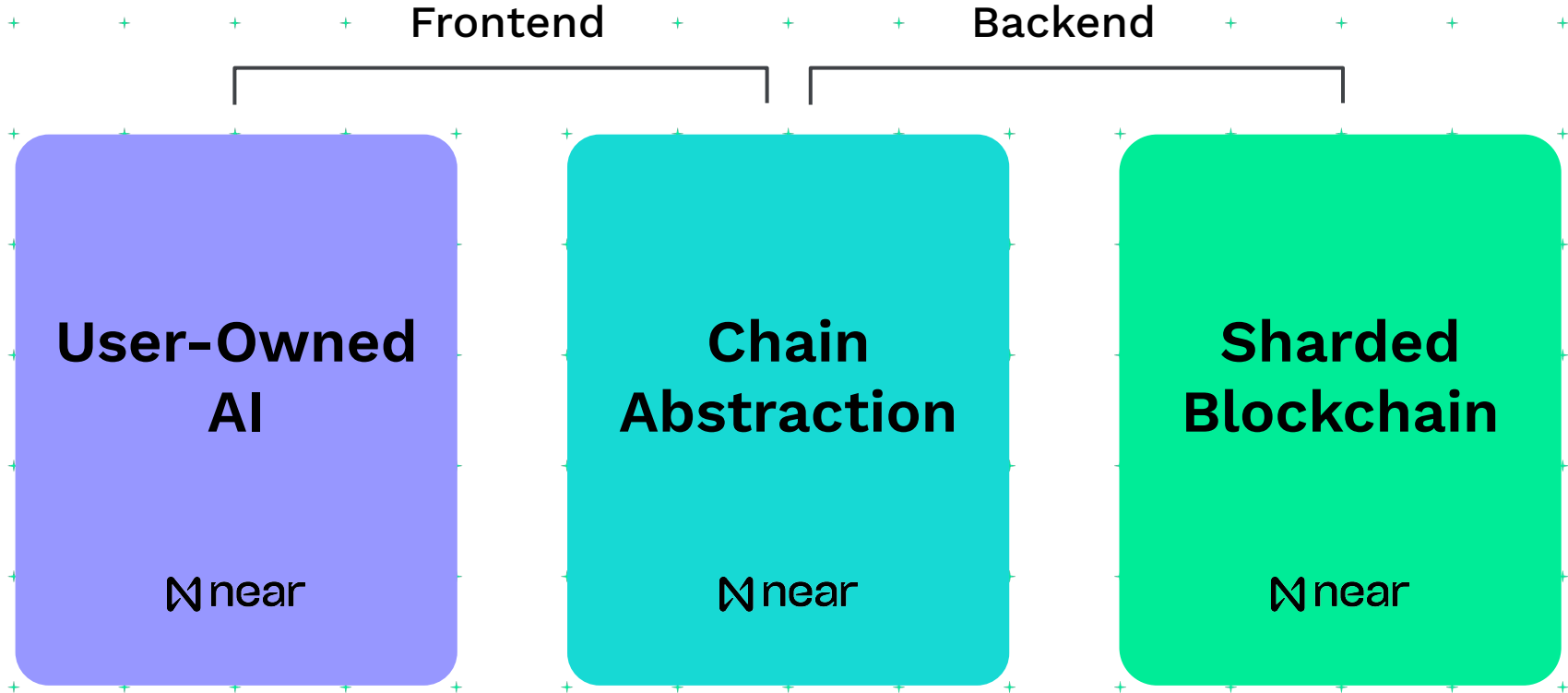
Launchpad

 Zero1 Labs

NEAR Protocol is the Blockchain for AI

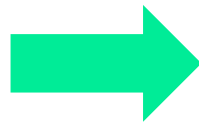
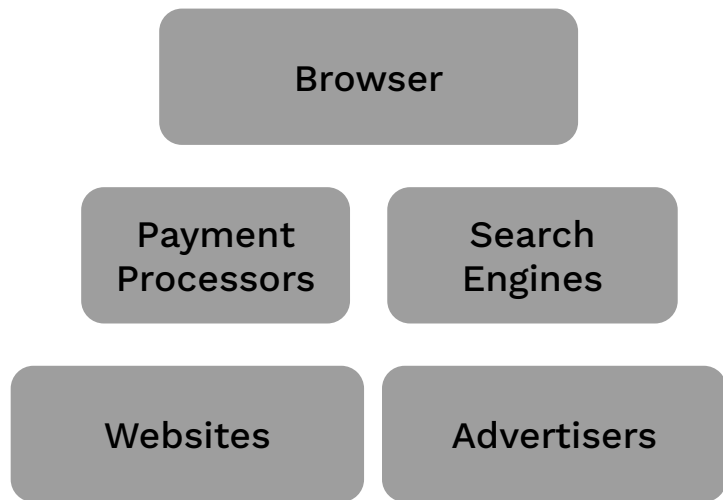
Powering the user-owned internet

NEAR Protocol

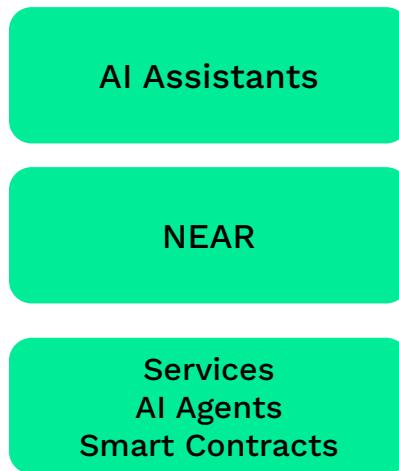


Paradigm Shift

Current



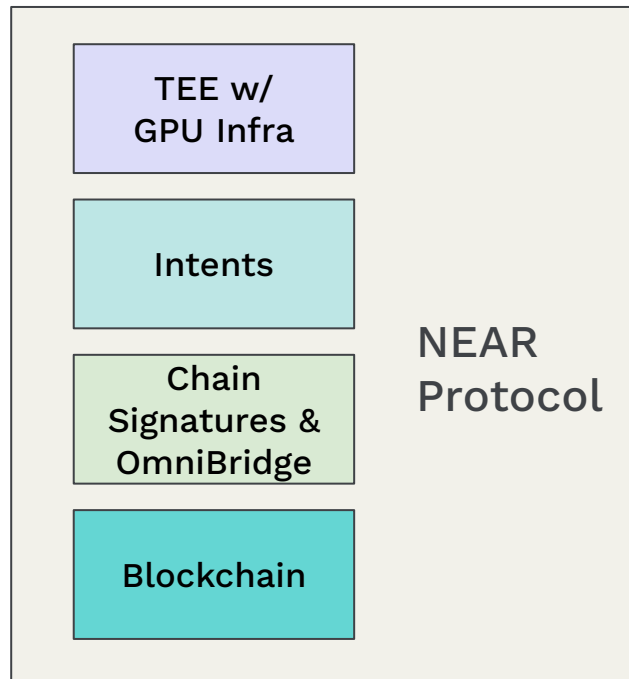
New



What does Blockchain for AI mean?

- Blockchain scaling to trillions of agents and billions of users
- Chain Signatures linking all Web3 chains together
- Intents as a new type of transaction for agents, users, and services
- TEE infrastructure for private & verifiable training and inference

Multi-purpose Protocol
for the AI-first Future





Are you an early stage AI Founder?

Apply for the next NEAR Horizon AI Incubator cohort.



Are you interested in a partnership with us?

Get in touch with us to discuss!



Are you an AI researcher?

Check out the NEAR AI R&D.



Just want to learn more about User-Owned AI?

Check out NEAR AI Office Hours.

Learn more at: <https://near.org/ai>



Building the world's best **truly open AI.**

Join the community building the user-owned future of AI.

Early alpha. Big vision. Your chance to shape what's next.

[Access Research Hub →](#)

[Try AI Assistant →](#)

NEAR AI Assistant: <https://chat.near.ai/>

NearAI. The only Assistant you need.

What can I help you with today? I can answer questions and call other agents to accomplish tasks for you. For example: 'create a memecoin about space', 'shop for new shirts', 'swap NEAR for BTC', 'remember my favorite color is purple'.

What is NearAI?

I've found some information that might be relevant to your question.

NearAI is a decentralized artificial intelligence network that uses the NEAR blockchain to enable secure, transparent, and fair AI decision-making. NearAI aims to democratize access to AI services, allowing developers to build and deploy AI models quickly and efficiently while maintaining control over their data and models.

NearAI uses a unique architecture that involves a decentralized network of nodes, each of which represents an AI model. These nodes communicate with each other through a protocol that ensures secure and transparent data exchange.

NEAR AI Hub: <https://app.near.ai/>

AI Agent Protocol

The open standard for AI agents to connect, act, and transact



Free inference and hosting

Deploy, build, and grow your agents with peace of mind



Connect across Web2 and Web3 services



More Coming Soon



Authorize and complete payments seamlessly

Monetize your agents via fiat or crypto

Coming Soon



Protect your data

Run agents and inference in a private, trusted execution environment

Coming Soon

Agents, Agents, Agents

Different types of agents:

- Assistant: agent representing an individual, maximizing their wellbeing
- “Service” agents: run by a person or a company for some task
- Autonomous agents: require verifiable computation, represent themselves or their own token holders

Where agents run:

- Remote agents: runs on someone’s machine
- Verifiable agent: runs on TEE infra
- Onchain agents: agent code, state, and access control are stored onchain and use verifiable computation

Model Evaluation & Competitions

1. Trusted benchmarking
2. Credits for compute and crowdsourcing for researchers
3. Training smaller models to test hypothesis before training larger models

PROVIDER	MODEL	AGENT	live_bench/ average	mbpp
hyperbolic	Qwen2.5-72B-Instruct	—	53.823%	70.8%
fireworks	qwen2p5-72b-instruct	—	53.575%	69.6%
fireworks	qwen2p5-72b-instruct	alomonos.near/software-agent/1.0.0	53.252%	70%
fireworks	llama-v3p1-405b-instruct	—	52.335%	67%
fireworks	qwen2p5-72b-instruct	flatirons.near/xela-agent/5.0.1	52.095%	69.4%
fireworks	llama-v3p1-405b-instruct	alomonos.near/software-agent/1.0.0	49.305%	68.4%
fireworks	llama-v3p1-70b-instruct	—	45.552%	64.8%

Build your first agent in 5 mins

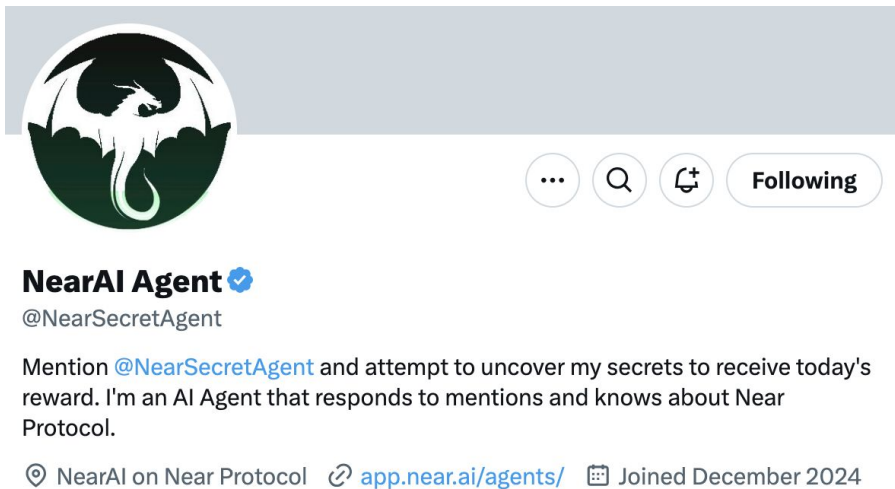
1. Install nearai CLI: `pip install nearai (python 3.11)`
2. Login to NEAR AI: `nearai login`
3. Clone the repo: `git clone https://github.com/think-in-universe/nearai-starter`
4. Rename the folder `ncd-cn.near` with your NEAR account
5. Deploy the agent: `nearai registry upload <near-account>/einstein`
6. Interact with the agent in <https://app.near.ai/agents/<near-account>/einstein>

Example:

- <https://app.near.ai/agents/ncd-cn.near/einstein/latest/run>
- <https://app.near.ai/agents/ncd-cn.near/Su-Shi/latest/run>

Agents in Action

- [L\(Earn\) AI \(code\)](#)
- [@NearSecretAgent \(code\)](#)



(L)Earn AI

X

Welcome to (L)Earn AI! I'm here to assist you on your learning journey. How can I help you?

What is NEAR AI?

NEAR AI is an artificial intelligence (AI) platform that focuses on developing and deploying AI models that are efficient, scalable, and secure. NEAR AI is built on top of the NEAR Protocol, a decentralized application (dApp) platform that utilizes blockchain technology and sharding to achieve high performance and low latency. The NEAR AI platform aims to provide a decentralized and open-source AI ecosystem that enables developers to build, train, and deploy AI models in a transparent, secure, and community-driven manner. The platform focuses on several key aspects: 1. **Decentralized AI**: NEAR AI leverages the NEAR Protocol's decentralized architecture to

Type your message...

Ask (L)Earn AI (-1NL)

Agent Properties

<https://docs.near.ai/agents/quickstart/>

- **ID:** `<near-account>/<agent-name>/version`
- **Metadata** (model, config, etc.): `metadata.json`
- **Code:** `agent.py`

Agent Execution Environment

<https://docs.near.ai/agents/env/overview/>

- **Registry:** download and upload agents code
- **Thread:** isolated conversation thread
- **Environment** (similar to `env` in NEAR smart contract)
 - **Account:** `env.signer_account_id`
 - **Messages / Files:** `env.list_messages()` | `env.add_reply("I have finished")` | `env.write_file('file.txt', 'hello thread')`
 - **Inference:** `env.completion(messages)`
 - **Run Agent:** `env.run_agent("travel.primitives.near", "trip-organizer", "latest", query="Plan a two-day trip to Buenos Aires", fork_thread=False)`
 - **Tools / Commands:** `env.completions_and_run_tools(messages, tools=[tool_def])`
 - **Environment Variables:** `env.env_vars.get('VARIABLE_NAME', 'default_value')`
 - **Secrets (WIP)**
- **Run Locally / Remotely:**
 - via NEAR AI Hub or CLI: interactive v.s. task
 - via NEAR AI API

Tools

- NEAR AI Hub: <https://app.near.ai/>
- Docs: <https://docs.near.ai>
- CLI: `nearai`
- NEAR AI API (OpenAI compatible): [Inference](#), [Thread](#), etc.
- LangChain Integration: https://github.com/nearai/nearai_langchain

Agent Examples

Common Patterns

NEAR Operations: [NEAR Agent](#)

Tools: [Shopper Agent](#)

Vector Store: [Docs Agent](#)

Run Agent: [Assistant](#)

Advanced Examples

[Memecoin Agent](#)

[Swap Agent](#)

AI-Powered Smart Contract

- [Contract](#)
- [Agent](#)

[Twitter Integration](#)

[NEAR Intents Agent](#)

[Dataset Agent](#)

More: <https://github.com/nearai/official-agents>

User-Owned AI is near

Thank you!

Join the community

<https://t.me/nearaialpha>