

Generative AI & Internet for AI (AI Network)

Common Computer Inc.

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Introduction

Software Engineering

- Search
- Distributed Computing
- Machine Learning
- User Modeling

Instructor, Mentor

- Open Source Hackathon
- Machine Learning Crash Course
- Jeju Machine Learning Code Camp
- Google Impact Challenge

Founder of Common Computer & AI Network



Common Computer 소개 (<https://comcom.ai>)



김민현

2일 ·

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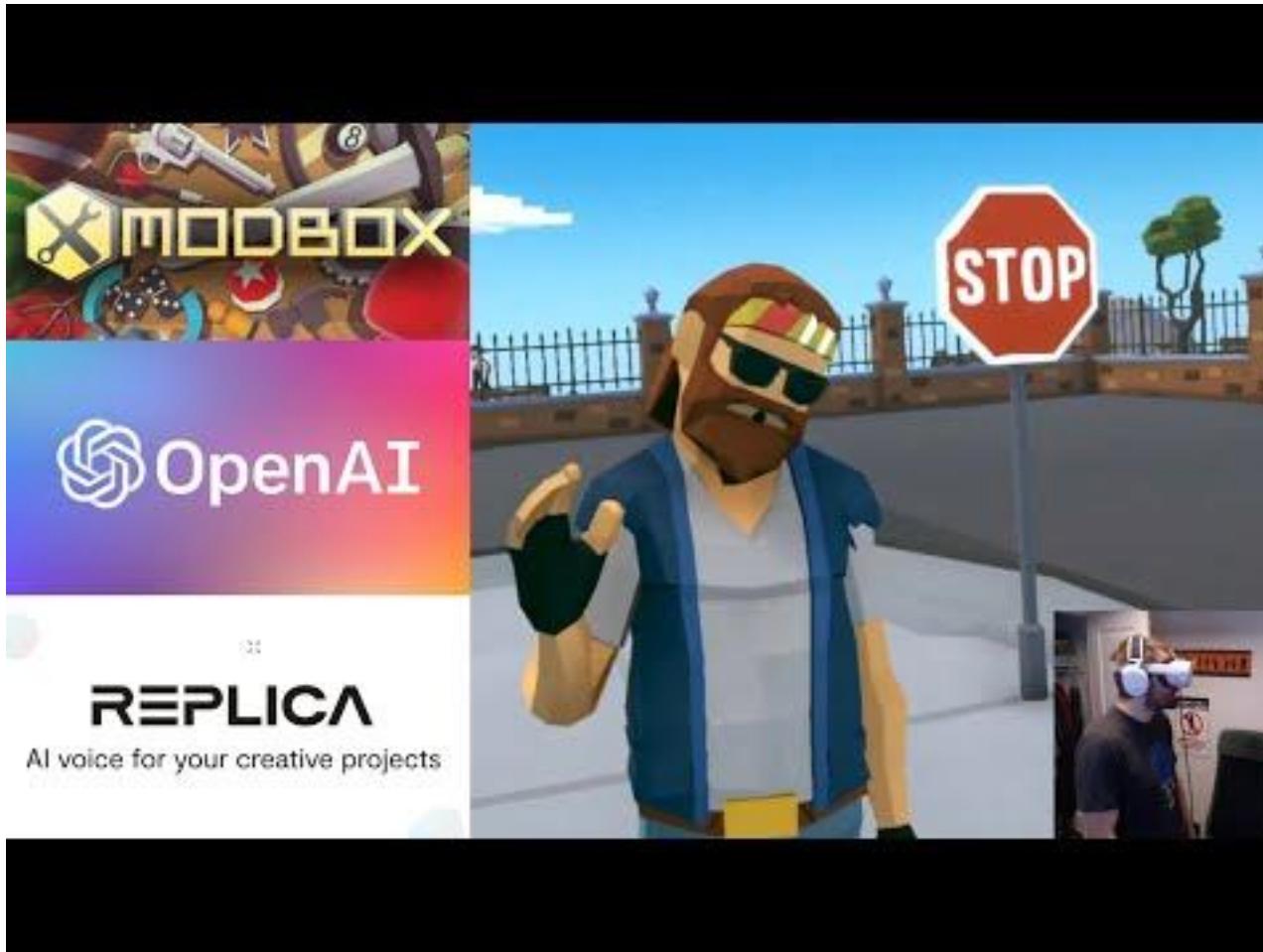
우리가 하는 일을 누구나 이해할 수 있게 한 줄로 설명하는 일.

AI Network, the internet for AI, AI를 연결하는 인터넷을 만들어요. Web3는 Generative Web이 될거에요. 인터넷에는 사람이 만든 컨텐츠 보다 AI가 만든 컨텐츠가 많아질 거예요. 사람과 이야기 하는 시간보다 AI랑 이야기 하는 시간이 많아질 거예요. 그래서 AI를 위한 인터넷이 필요해요.

5년 동안 아주 간단하게 설명했던 말들이

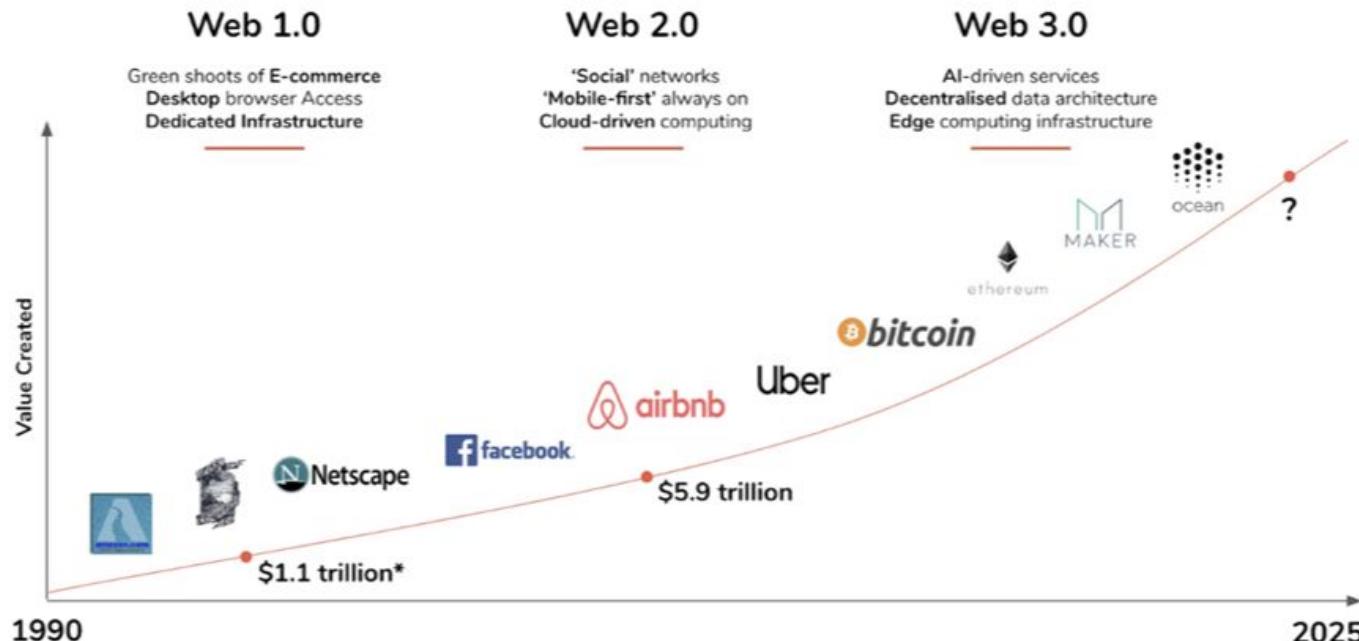
아무도 이해하지 못하는 말에서 누구나 이해하는 말로 바뀌었다.

우리가 뭘 한건 아니고 ChatGPT랑 구글이 했다.



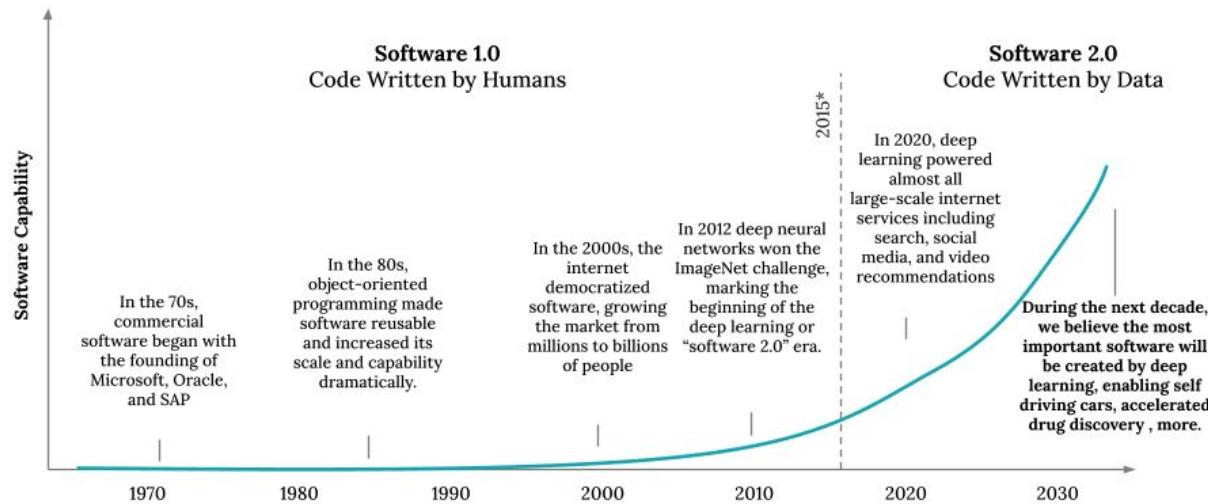
Lesson 1. Web3 Interface

The Evolution of the Web



* Internet companies market cap as of 2000

Lesson 2. AI를 만드는게 매우 쉬워진다



Lesson 3. AI BM



Organize world information and make universally accessible and useful.

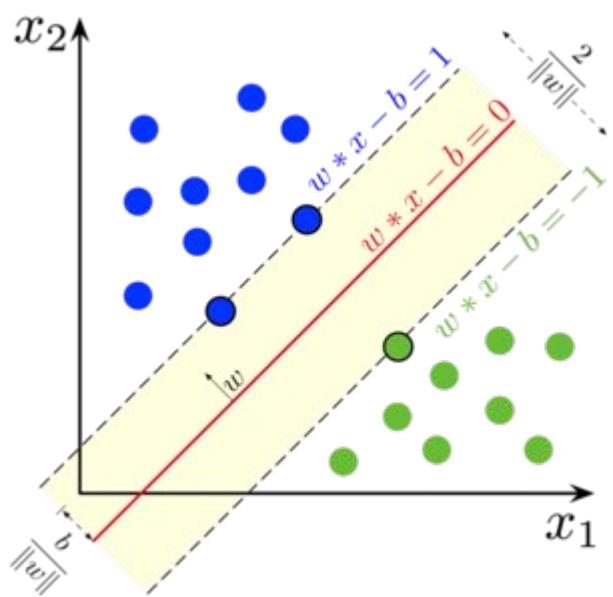
Vs.

ensure that **artificial general intelligence** benefits all of humanity.

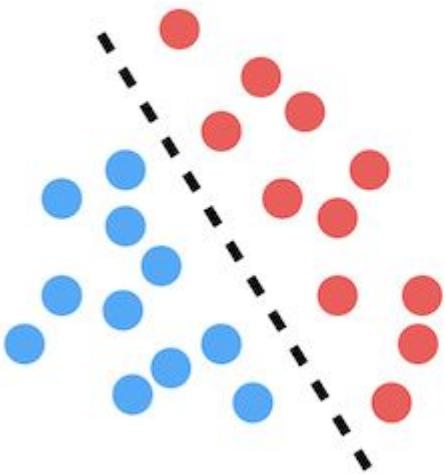
General Intelligence?

1. Pre-training
2. Transformer - attention is all you need
3. Fine-tuning
4. Prompt Engineering
5. ChatGPT
6. AGI ??

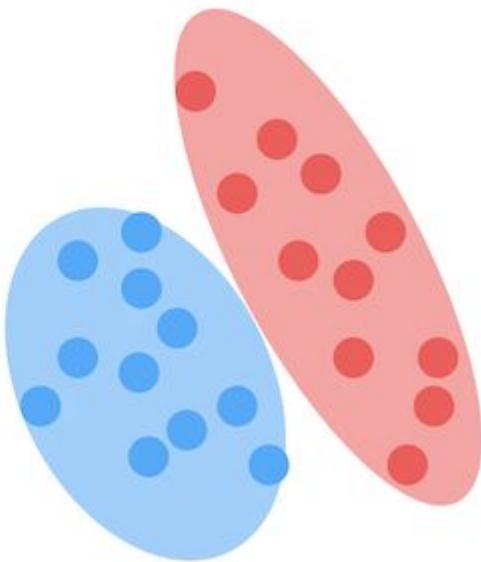
1. Pre-training



Discriminative



Generative



2. Transformer - attention is all you need (2017)

The FBI is chasing a criminal on the run .

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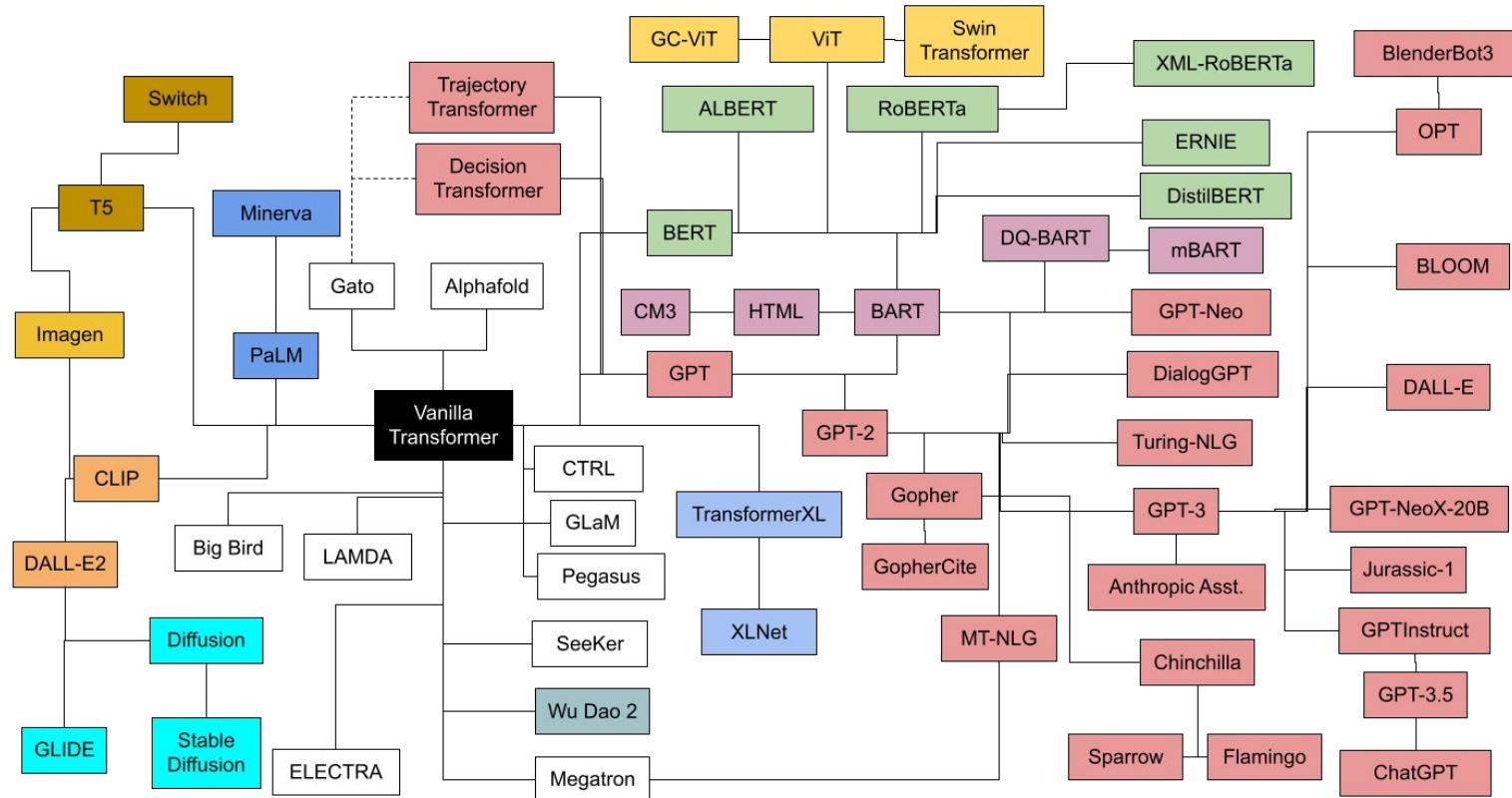
The FBI is chasing a criminal on the run .

3. Fine-tuning

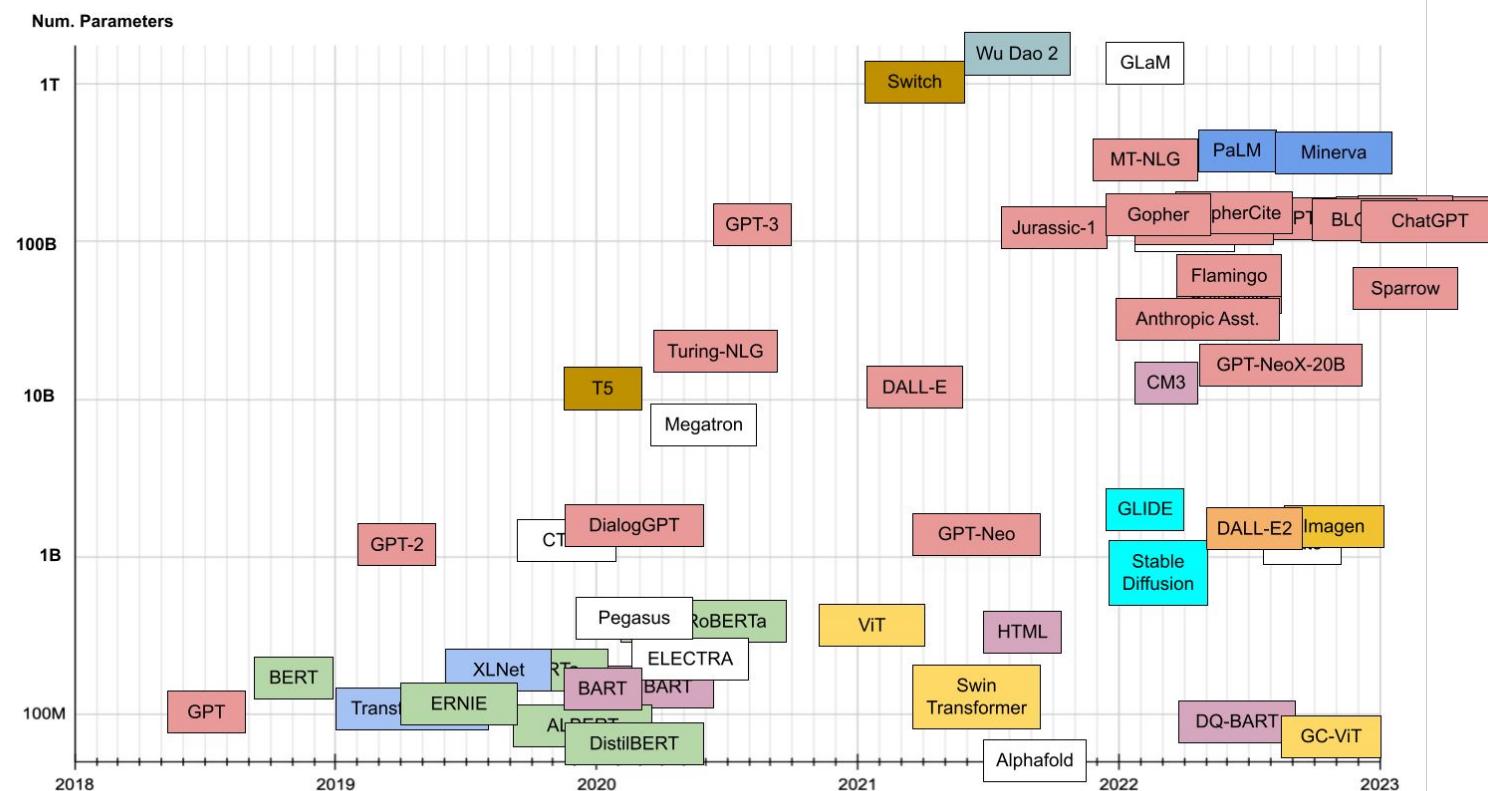
-  fine tuning bert for

-  fine tuning bert for **question answering**
-  fine tuning bert for **sentiment analysis**
-  fine tuning bert for **classification**
-  fine tuning bert for **text classification pytorch**
-  fine tuning bert for **named entity recognition**
-  fine tuning bert for **text summarization**
-  fine tuning bert for **sentence similarity**
-  fine tuning bert for **text classification huggingface**

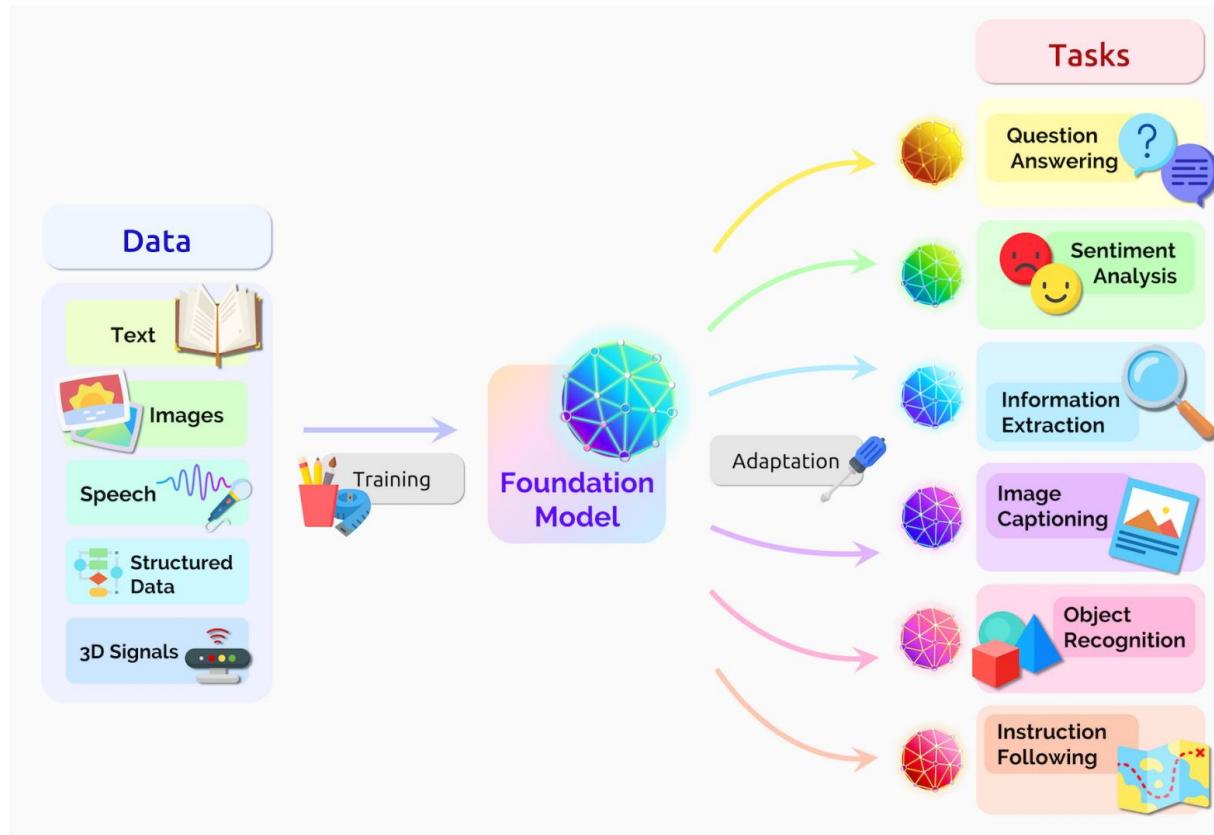
Transformers



Model Size

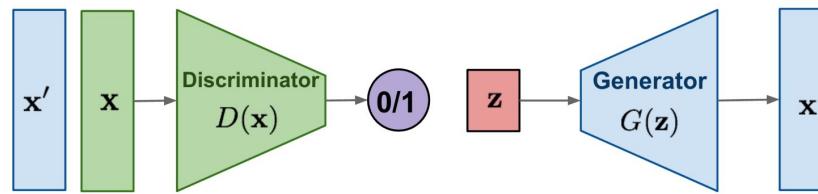


4. Prompt engineering

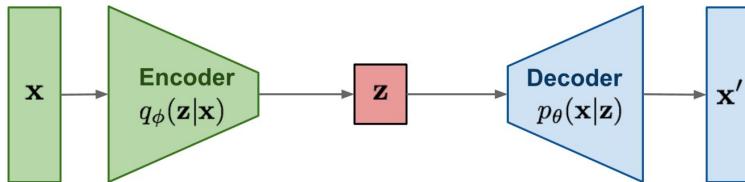


Diffusion Models

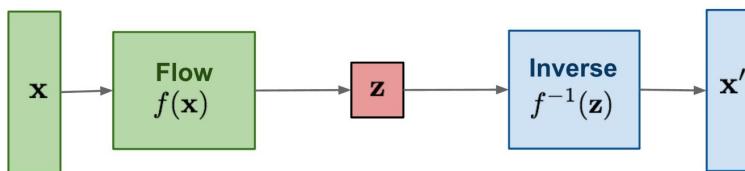
GAN: Adversarial training



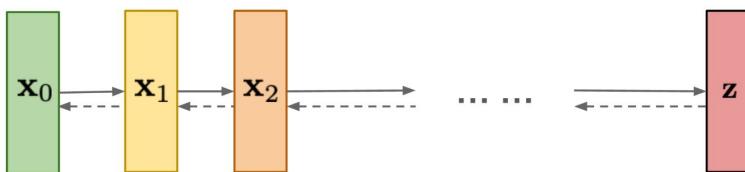
VAE: maximize variational lower bound



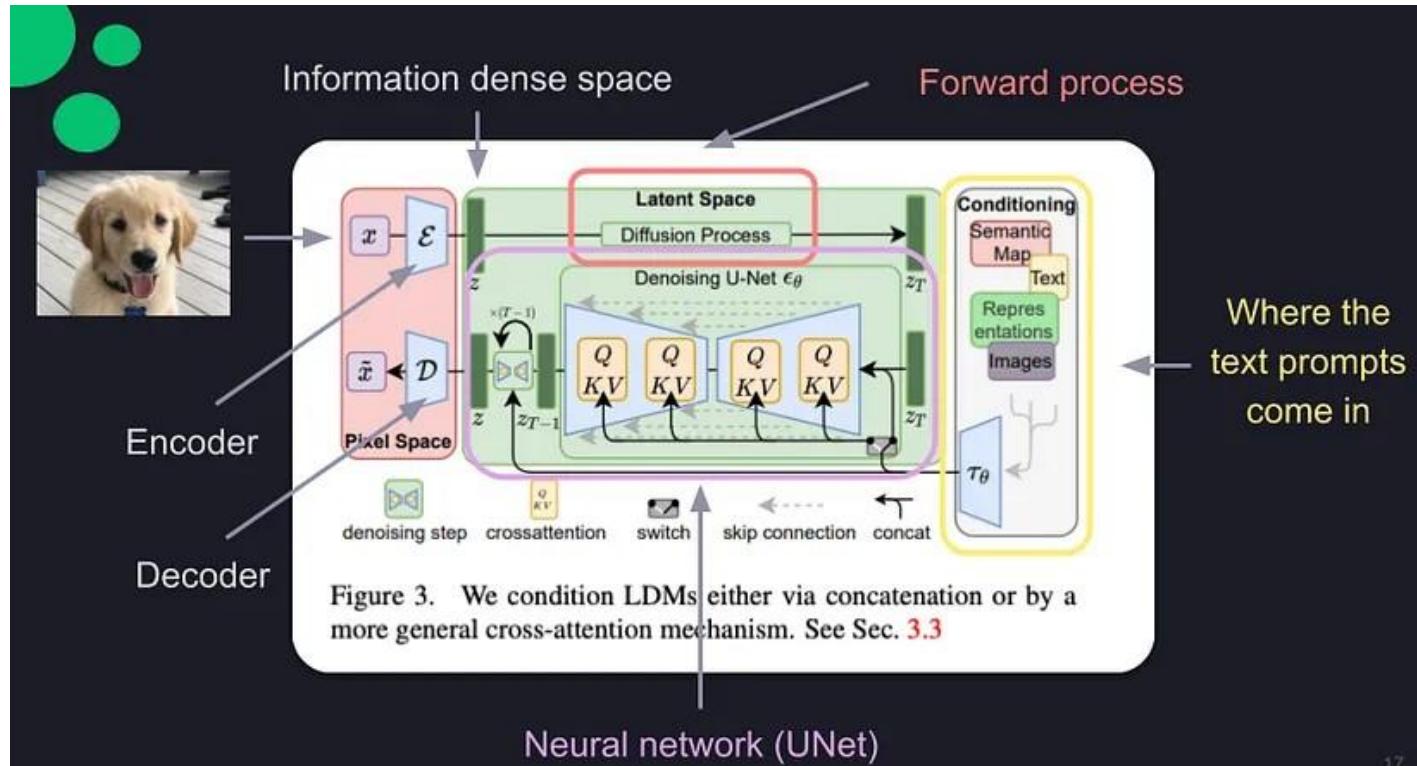
Flow-based models:
Invertible transform of distributions



Diffusion models:
Gradually add Gaussian noise and then reverse

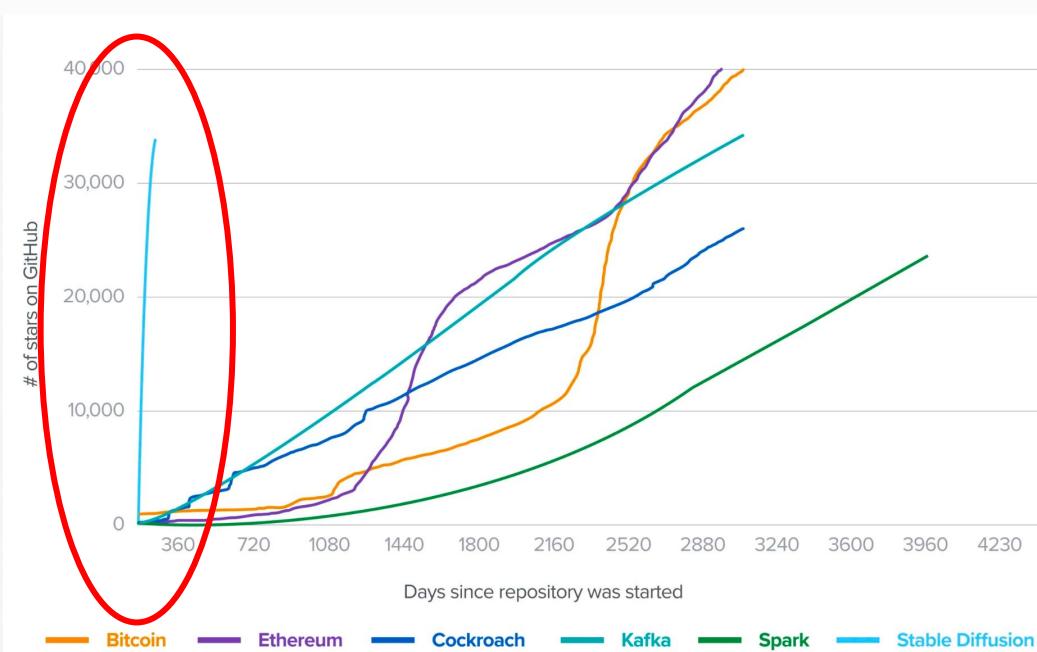


Latent Diffusion Models



33600 stars in the first 90 days

Stable Diffusion Developer Adoption

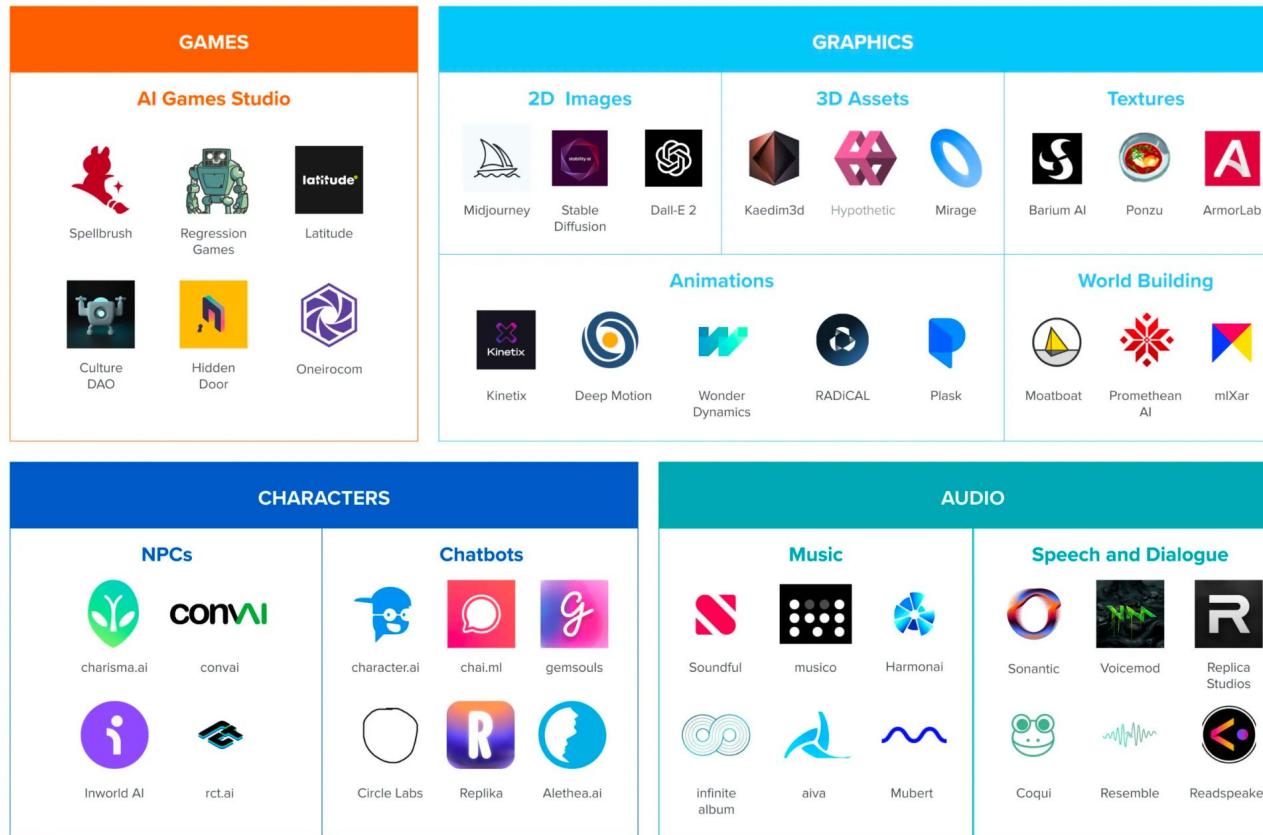


Stars on GitHub for major open source infrastructure technologies. Stable Diffusion accumulated 33,600 stars in its first 90 days, a benchmark other projects achieve in years or decades.

Developer -> Creator

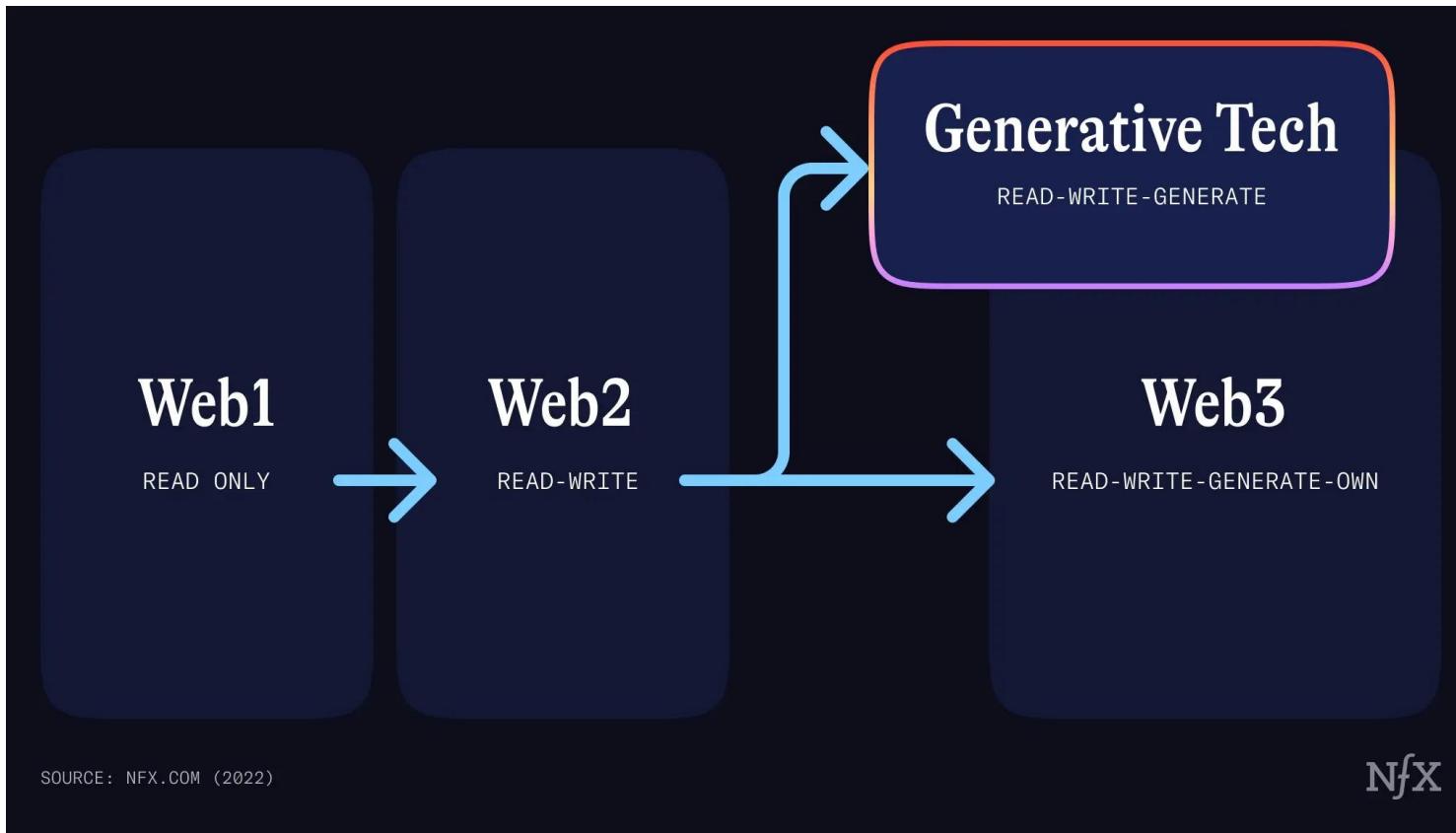
질문	나 뭔가 설정 잘못건드렸나? [1]	o o	2022.10.07	227	0
그림	□ 정답이 나올 때까지 WD나 더 파야지 [10]	동양반달곰입문	2022.10.07	443	1
질문	지금 상황에선 그냥 다 받는게 나음?? [1]	o o	2022.10.07	180	0
	□ 손이 감동을 깨네 [6]	아벤	2022.10.07	227	1
질문	□ 어라 이거 vae 로드 안되는데 뭔가 문제인지 아는 갤럼 있나 [1]	파랑파랑	2022.10.07	118	0
	□ 아 토렌트는 왜 설치안되고 난리야 [1]	ㅁㄴ	2022.10.07	168	0
그림	□ 오 이거 눈 눈 이쁘게 뽑힘 [5]	o o	2022.10.07	402	3
	extremely detailed, face!!!! 이런 프롬프트는 이제 안 쓰나 [4]	울프릭포에버	2022.10.07	167	0
그림	□ 3인 단체야외노출 [2]	o o	2022.10.07	1193	0
그림	□ 꿀꿀 성수	o o	2022.10.07	1024	0
그림	□ 냥냥냥냥	따흐흑	2022.10.07	131	0
그림	□ 수간)동물원 고릴라가 발정기니 주의요망! [6]	IIIilllli	2022.10.07	597	0
질문	질문: ai가 나에게 충분한 정보를 제공해줄까? [2]	산이미래나	2022.10.07	169	0

Generative AI for Games Market Map

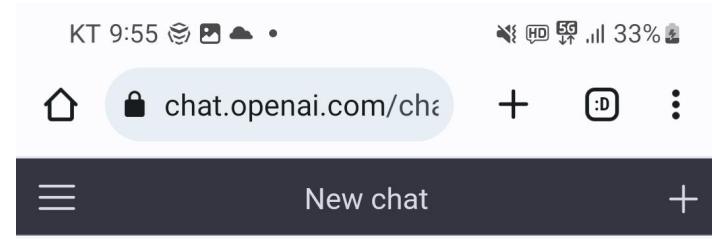
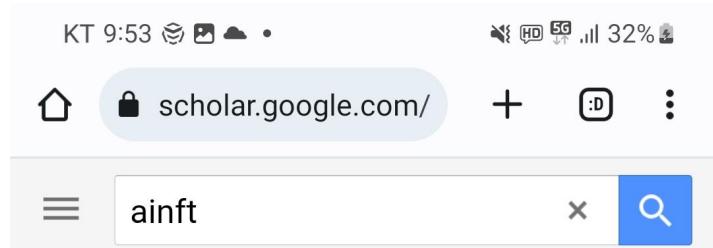


Graphics provided herein are for informational purposes only and should not be relied upon when making any investment decision.

Generative Web



Query: AINFT



Query 하는 순간에 혹은 그 전에 정보를 생성한다. 없는 정보를 보여주는 것과 생성 정보를 보여주는 것은 다르다.

Google v1. KeyWord Search

Google v2. Zero Search

Google v3. Predictive Search

??? v4. Generative Search

The screenshot shows a mobile browser interface. At the top, there are status icons for signal, battery level (33%), and connectivity. Below the status bar is a navigation bar with a house icon, a lock icon, the URL 'chat.openai.com/ch...', and other standard browser controls. A dark banner across the middle of the screen displays the text 'AI NFT Papers Recommendation.' with a menu icon on the right. The main content area shows a thumbnail of a green and white abstract pattern, followed by the title and abstract of a paper. The title is 'Title: AI Generated Art and Non-Fungible Tokens: A Novel Mechanism for Creative Content Protection and Monetization'. The abstract begins with 'Abstract: The rise of artificial intelligence (AI) has enabled new forms of creative expression, including AI-generated art.'

KT 9:57 🔍 📸 ☁ • 🔊 HD 5G ⚡ 33%

chat.openai.com/ch...

AI NFT Papers Recommendation.

Title: AI Generated Art and Non-Fungible Tokens: A Novel Mechanism for Creative Content Protection and Monetization

Abstract: The rise of artificial intelligence (AI) has enabled new forms of creative expression, including AI-generated art.

AI 인터넷 세상에는
owned AI 보다
autonomous AI 가 더 많은 것이

자연 스럽다.

스스로 자(自), 그러할 연(然)

2 types of AI

인공지능의 2가지 종류

Owned AI

Autonomous AI

Dog & robot vacuum cleaner



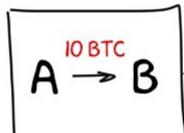
So, what does blockchain have to do with Autonomous AI?

블록체인은 Autonomous AI와 무슨 상관이 있을까?

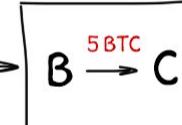
Blockchain as a State Machine

HISTORY:

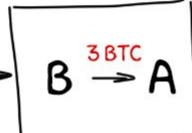
WAS
A = 10
B = 10
C = 10



BLOCK 14



BLOCK 15



BLOCK 16

CURRENT
A = 3
B = 12
C = 15

STATES

A = 10
B = 10
C = 10

TRANSACTION
A → B: 10 ETH

BLOCK 13

A = 0
B = 20
C = 10

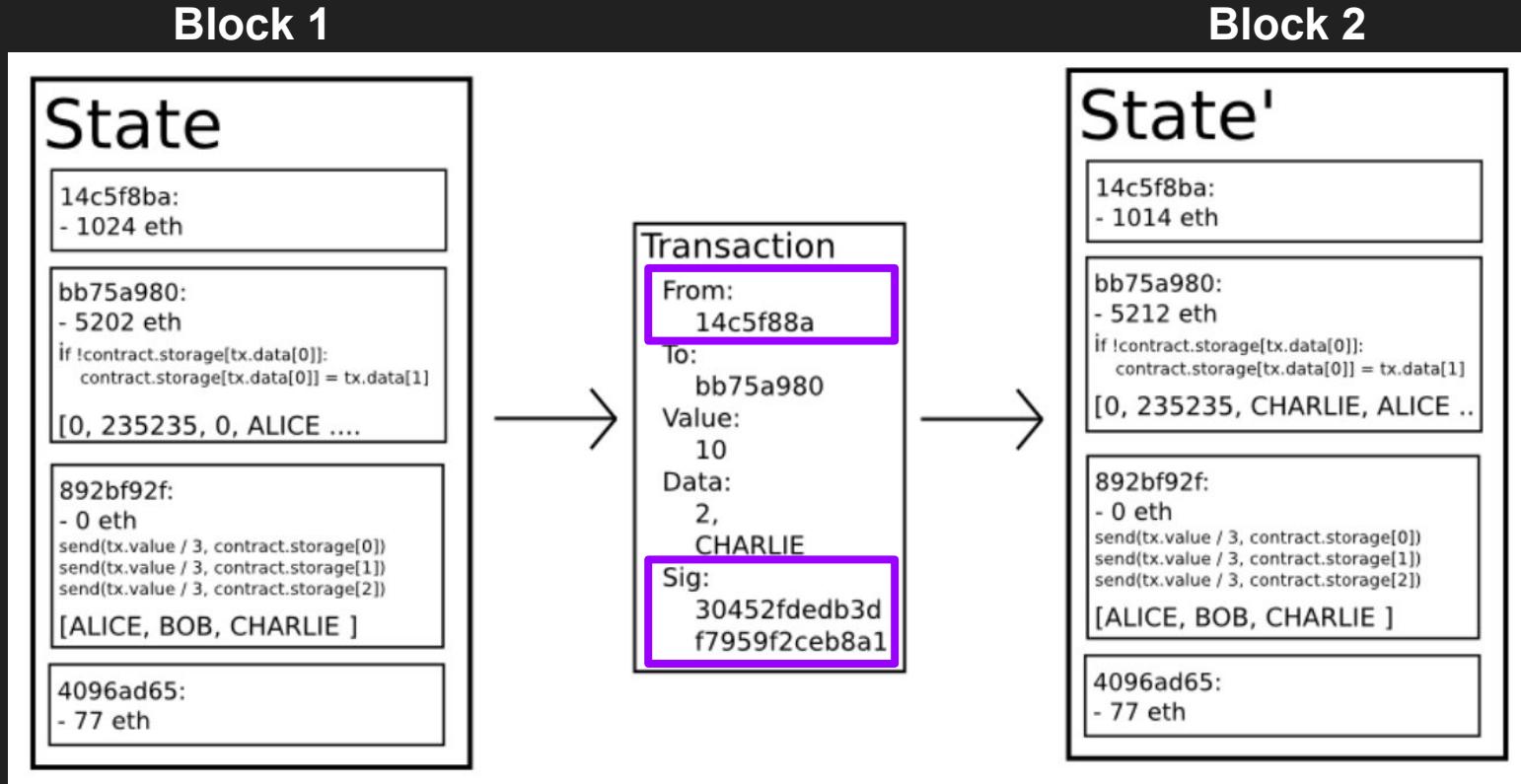
TRANSACTION
B → C: 5 BTC

BLOCK 14

A = 0
B = 15
C = 15

BLOCK 15

Externally Owned Accounts (EOA) Private Key



Contracts

```
contract owned {
    address owner;

    // Contract constructor: set owner
    constructor() {
        owner = msg.sender;
    }

    // Access control modifier
    modifier onlyOwner {
        require(msg.sender == owner);
        -
    }
}
```

Contracts

```
contract mortal is owned {
    // Contract destructor
    function destroy() public onlyOwner {
        selfdestruct(owner);
    }
}
```

Decentralized Autonomous Organization (DAO)

```
contract Faucet is mortal {
    // Give out ether to anyone who asks
    function withdraw(uint withdraw_amount) public {
        // Limit withdrawal amount
        require(withdraw_amount <= 0.1 ether);
        // Send the amount to the address that requested it
        msg.sender.transfer(withdraw_amount);
    }
    // Accept any incoming amount
    function () public payable {}
}
```

How can Autonomous AI affect our lives?

블록체인으로 Autonomous AI를 만들었다면...

Autonomous Cars



```
contract mortal is owned {
    // Contract destructor
    function destroy() public onlyOwner {
        selfdestruct(owner);
    }
}
```



Wall-E (2008)

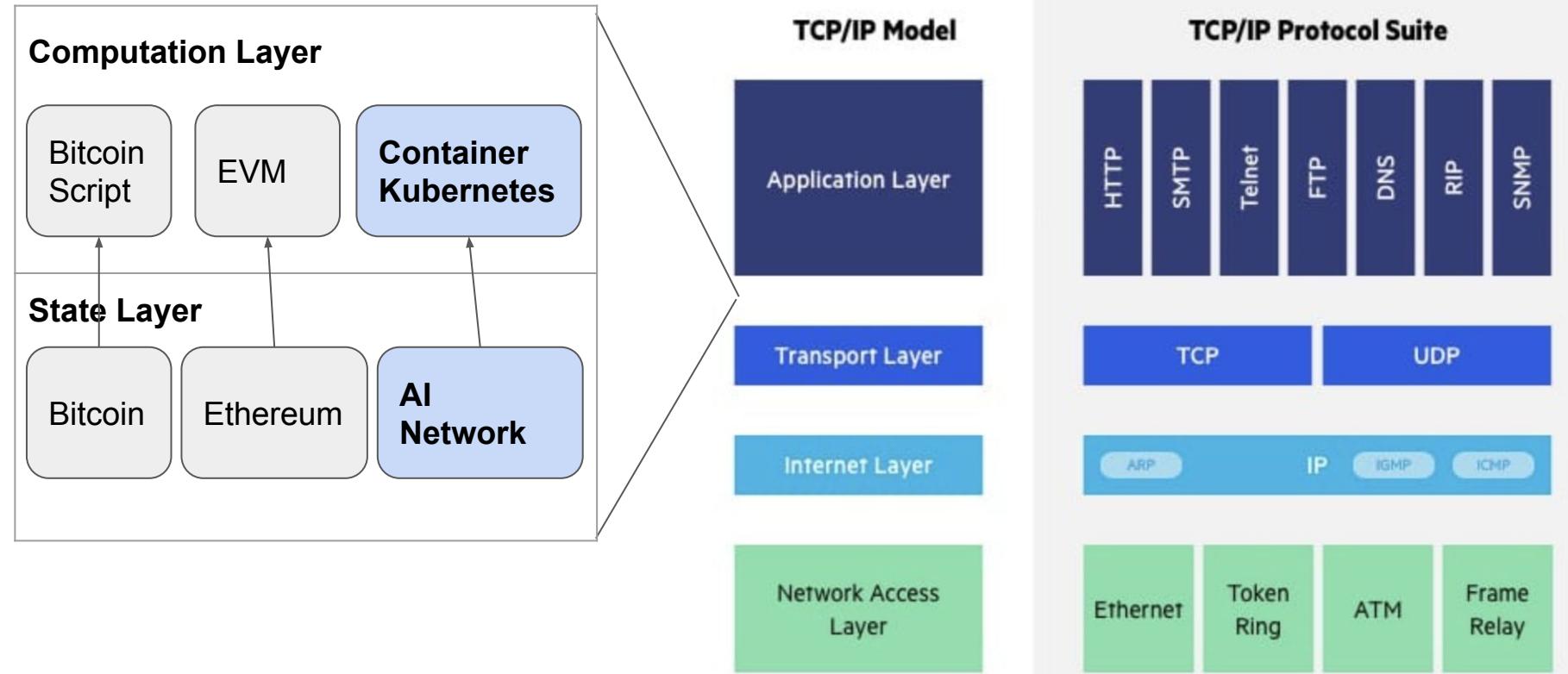
AI Network

The Internet for AI

What is the internet?

What is the web?

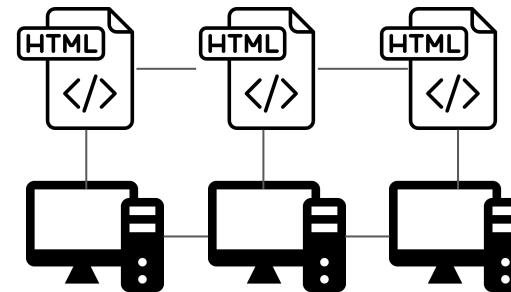
AI Network Web 3.0 Protocol Suite



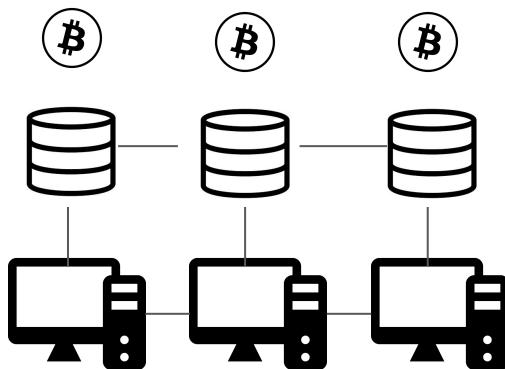
1960s Internet - Connecting computers



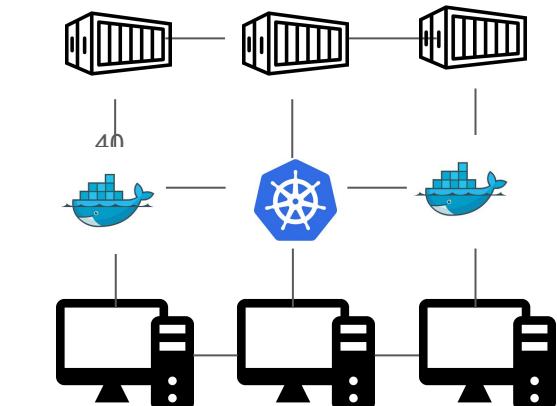
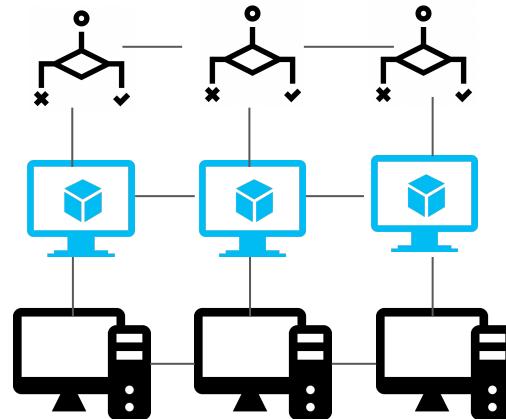
1989 World Wide Web - Connecting Documents



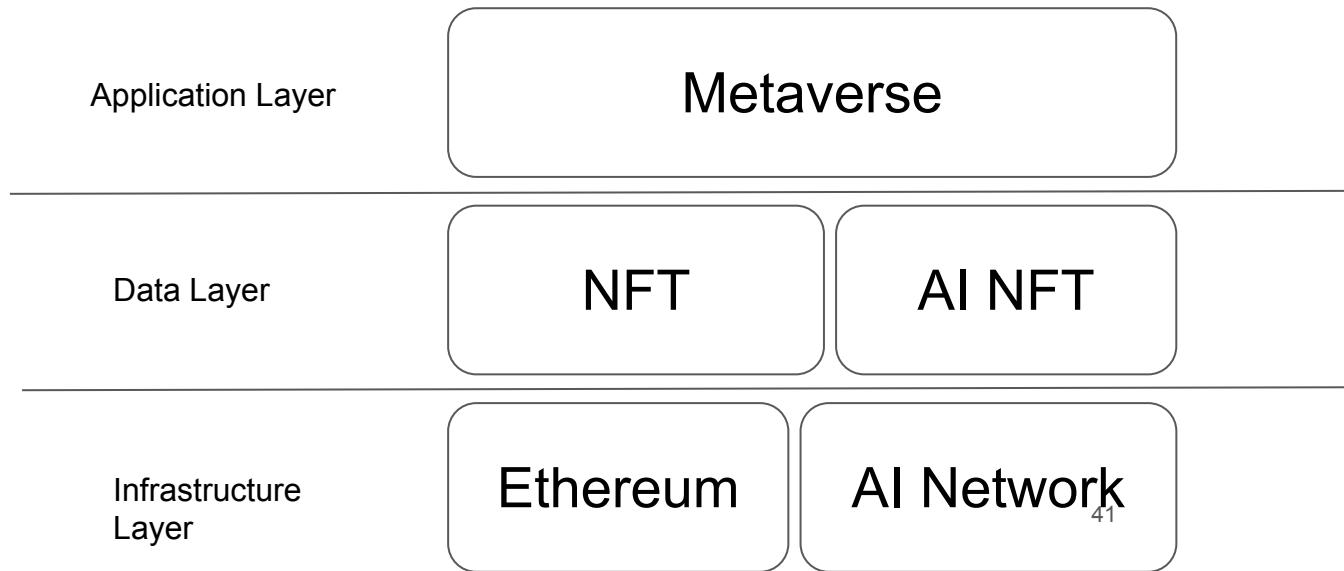
2009 Bitcoin - Remember numbers



2013 Ethereum - Connecting programs
2018 AI Network - Connecting containers



Web 3.0 (Internet for AI) Architecture



How to capture the token value?

Step 1. Tokenize GPUs (RUNO NFTs)

Step 2. Tokenize Community (AIN DAO NFTs)

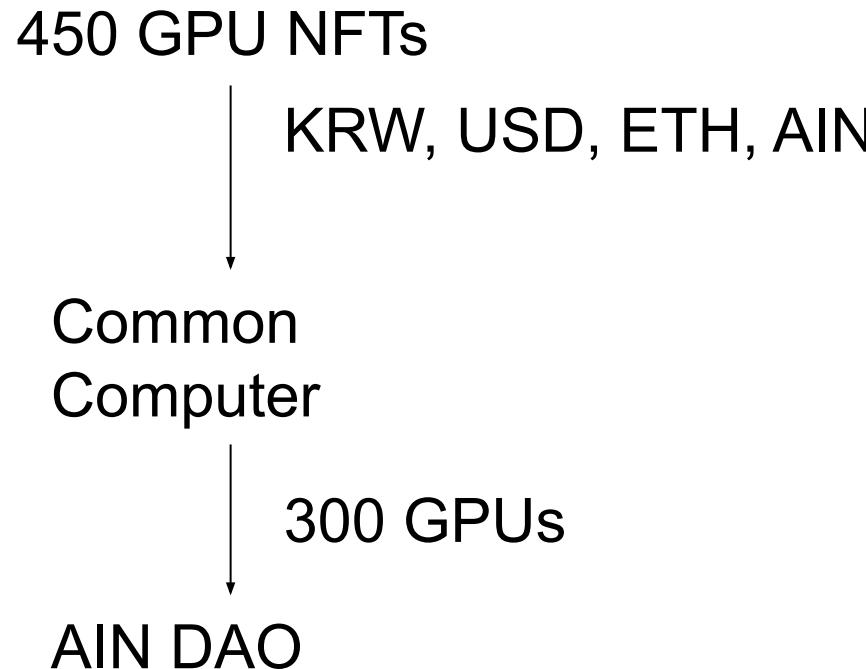
Step 3. Tokenize AI (AINFTs)

Step 4. Connect all with \$AIN

Stakeholders

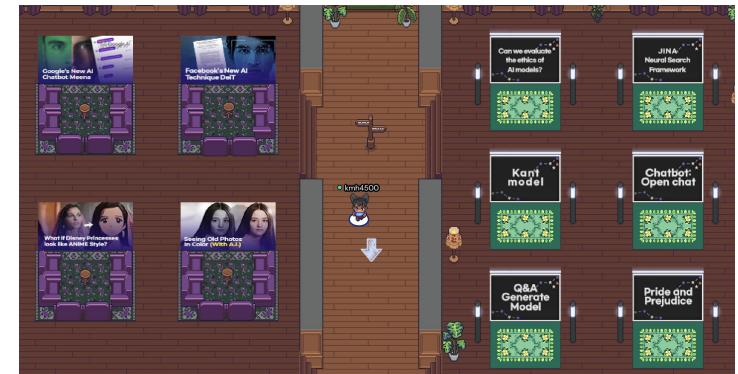
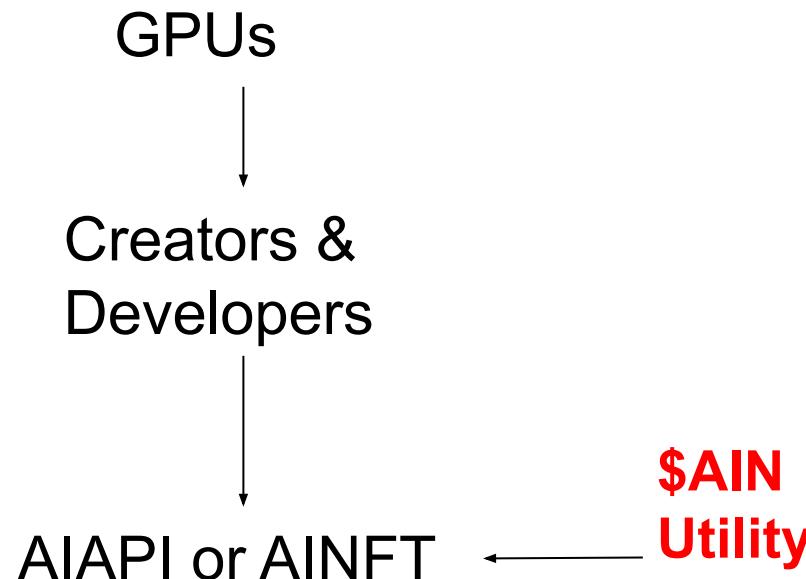
1. Resource Provider provides GPU through RUNO NFT
(<https://www.ainetwork.ai/node/price>)
2. Developers (<https://discord.gg/aindao>)
3. Creators (<https://ainetwork.ai/ainft>)

1. Resource providers – contribute GPUs by NFTs



2. Developers - AIN DAO

Global AI engineers in metaverse generates valuable (1) AI inferences (2) AI training (3) AI NFTs backed by AI Network resource providers.



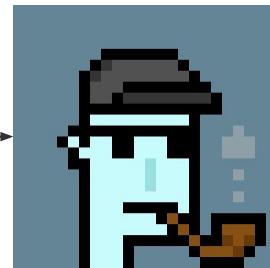
<https://gather.town/app/DdV5Fo1l0Z5DB0TP/ainetwork>

3. Creators - AINFT

Metaverse



NFT



+



=

GPT-X

Prompt: a man
with a pipe wears
black sunglasses
and cap.

AI NFT

