DECENTRALGPT WHITEPAPER

AI+DePIN+AGI

Creating a Path to Decentralized AGI

Contents

1 INTRODUCTION

In the field of artificial intelligence, especially in the development and application of large-scale language models such as GPT series, The dependence on centralized computing resources has become a major bottleneck. This dependence not only incurs high costs, but also raises serious concerns about data privacy, accessibility and transparency. The data processing and storage of centralized systems are usually concentrated in a few large data centers. This is not only an easy target for hackers, but also may lead to excessive centralization of control over data,thus affecting the fairness and transparency of the data.

DecentralGPT presents an innovative solution to the centralization model. As a decentralized AI large language model inference network, DecentralGPT supports a variety of open source large language models. It is committed to building a secure, privacy-preserving, democratic and transparent Artificial general intelligence (AGI) network.The distributed network nodes jointly complete data processing and model inferencetasks,DecentralGPT greatly reduces the dependence on a single computing center and enhances the anti-attack capability of the system.And improve global computing efficiency and efficient use of resource.

In addition, the decentralized nature of DecentralGPT ensures the democratization of technology.So that users from different regions and backgrounds can participate and benefit equally.By implementing end-to-end encryption and strict data access controls across the network,It protects user data from unauthorized access or abuse, thus solving the privacy protection problem in the traditional centralized model.At the same time, the open source nature of DecentralGPT also promotes the collaboration of the global developer community and promotes the rapid iteration and optimization of technology.

By breaking the limitations of traditional AI models, DecentralGPT has opened up a new path for the development of global AI technology.It heralds a more secure, fair and open AI future.

2 Global AIGC Industry Analysis and AGI Outlook

2.1 Market Value of AIGC Industry

AI Generated Content (AIGC) industry is rapidly becoming an important area of global scientif ic and technological development, covering the automated generation of a wide range of con tent from text, images, video to music.With the progress of technology and the expansion of application fields, AIGC is gradually changing the operation mode of media, advertising, entert ainment and education industries.Especially in terms of content production, personalized marke ting and user interaction experience, AIGC provides efficient and cost-effective solutions, enabl ing businesses to create and distribute content at unprecedented speed and scale.

In many important areas, such as media publishing, digital advertising, social media content p roduction and internal content management, AIGC technology has become a key tool for imp roving productivity and content personalization.

Media and news

Case: The New York Times uses AIGC technology to automatically generate sports news and f inancial bulletins.It achieves faster content update speed than manual work, and dynamically a djusts reports according to readers'feedback.

Data: Media companies utilizing AIGC experienced a 40% reduction in average content produc tion time and a 30% increase in content relevance and audience engagement.

The advertising industry

Case: a leading online retailer used AIGC to create personalized ads and saw a 20% increase in click-through rates.The return on advertising investment has increased significantly.

Data: AIGC technology has increased the click-through rate of advertising campaigns by 20% -30%, and increased the cost-effectiveness of advertising by 50% compared with traditional m ethods..

Educational Technology

Case: Online education platforms use AIGC to generate personalized learning materials and int eractive learning experiences for each user.Students' learning efficiency has increased by an av erage of 35%.

Data: Educational institutions that adopted AIGC saw a 40% increase in student engagement and a 50% increase in student satisfaction.

2.2 Potential Growth of Future Market Size

Based on the latest market research, the market size of AIGC industry is expected to reach tri llions of dollars in the next decade.This growth is mainly driven by the following:

- ✓ Technological innovation: With the progress of AI and machine learning algorithms, generative models are becoming more and more accurate and efficient.This is espe cially true of the latest generation of language models, such as GPT and BERT, whi ch are able to generate text and images that almost match those of humans.

- ✓ Enterprise demand growth: Digital transformation has driven a sharp increase in en terprise demand, and enterprises not only need to generate a large amount of con tent quickly.There is also a need for this content to be highly personalized and ad aptable.It is expected that by 2025, at least 60% of large enterprises in the world will use AIGC technology.

- ✓ Cost Reductions: AIGC can reduce content production costs by up to 70%, especiall y where large-scale content generation is required.90% of the enterprises surveyed s aid that cost savings were the main motivation for their adoption of AIGC technolo

- ✓ Development in emerging markets: The demand for AIGC in emerging markets is g rowing rapidly as Internet coverage and technology acceptance increase,especially in Asia and Africa, the market growth rate is expected to exceed the global average, reaching an average of more than 35% annually.

2.3 AGI's Future Outlook

Artificial general intelligence (AGI) is ultimate goal in the field of AI, which represents an int elligent system.Can rival or even surpass humans in their ability to understand, learn, and ada pt to new situations.The realization of AGI will be a major breakthrough in human history.It m eans that machines can perform any cognitive task that human intelligence can accomplish.

We expect AGI to arrive in 5-10 years, and it has a wide range of potential applications.Appli cations range from complex decision support systems to fully autonomous service robots.A lar ge number of scientists and researchers are working on how to make machines have a wide range of intelligence and adaptability.This involves breakthroughs in areas ranging from reinfor cement learning to autonomous affective cognition.

Going forward, AGI could bring fundamental changes to society.In the medical field, AGI can help design personalized treatment plans and perform complex surgical procedures;In the field of environmental protection, AGI can analyze and predict environmental changes and propos e effective protection measures.In addition, AGI has great application potential in education, fi nance, law and other fields.It can provide more accurate and efficient services.

2.4 Role of DecentralGPT in AGI

DecentralGPT plays a vital role in the development of AGI. As a decentralized AI model infere nce network,DecentralGPT offers a new possibility through its unique decentralized network str ucture,Support the development of AGI and address some of the challenges faced by existing centralization models.

First of all, DecentralGPT's decentralized architecture can significantly improve computational ef ficiency and reduce operating costs.In the traditional centralized model, all data and computin g needs are concentrated in a few large data centers.This not only increases costs, but can al so lead to processing bottlenecks and delays.Through distributed computing resources, Decent ralGPT can balance the load on a global scale and achieve rapid response and efficient opera

tion.

Second, DecentralGPT strengthens the security and privacy of data.In this network, data can b e processed without leaving the local environment.It effectively reduces the risk of data leaka ge and abuse.This is particularly important for building trust and promoting AGI technology, e specially when dealing with sensitive information such as medical records and personal financi al data.

DecentralGPT supports the democratization and globalization of AGI technology.It provides eq ual opportunities for researchers and developers around the world to participate, regardless of their location.You can use this platform to develop and test AGI applications. This helps to p romote global innovation and accelerate the research and application of AGI technology.

Through these mechanisms, the DecentralGPT not only supports AGI's technological advances

,It also provides a new perspective for its social implementation and ethical discussion.

3 Overview of DecentralGPT

DecentralGPT is a decentralized AI large language model inference network that supports mul tiple open source large language models.Its design goal is to build a universal artificial intelli gence (AGI) that is secure, privacy-preserving, democratic, transparent, open source, and availa ble to everyone.This network takes advantage of many advantages of decentralized technology. Include enhanced data security, privacy protection, and improved efficiency and reduced costs through distributed computing resources.

3.1 Core Features of DecentralGPT

- ✓ Decentralized architecture: DecentralGPT uses a distributed network of nodes, which are located all over the world.Each node can run the re task of AI model indepen dently.This layout helps to reduce the dependence on a single data center and incr ease the stabilitv and attack resistance of the svstem.

- ✓ Privacy and security: In DecentralGPT, data is handled according to strict privacy protection standards.Data can be encrypted at the local node to minimize the risk of privacy disclosure caused by centralized data processing.

- ✓ Democratic access: The decentralized structure allows users and developers from all over the world equal access to AGI resources.Users in both developed and developing countries can use this platform to develop and innovate AI applications.

  ers and developers to work together to improve and optimize the model.

- ✓ Improve efficiency and reduce costs: By leveraging globally distributed computing resources, DecentralGPT optimizes resource usage.Increase processing speed while reducing the cost of centralizing computing resources.

- ✓ Drive technological innovation: Open model support and global participation promote rapid iteration and innovation of technology.Accelerating the development of artificial intelligence.

- ✓ Enhancing social equity: DecentralGPT helps to bridge the technology gap by making advanced AI technologies accessible and available to users around the world.Enhance the overall technological level and application capability of the global communit

3.2 Potential impact of DecentralGPT

These features and goals of the DecentralGPT demonstrate its potential role in moving the fie ld of artificial intelligence forward.Especially in promoting the development of AGI in the direc tion of democratization and globalization.

✓ Democratizing Technology Access

DecentralGPT significantly enhances global users' access to advanced artificial intelligence technology throu gh its decentralized structure. In traditional centralized models, advanced AI services are often concentrate d in technologically advanced regions, leaving other areas unable to enjoy the same level of service due to resource and technology limitations. DecentralGPT breaks down these barriers by utilizing globally distri buted nodes, ensuring that users in any region can receive fast responses and high-quality AI processing capabilities. This widespread approach greatly promotes balanced technological development worldwide, all owing individuals and businesses in less technologically developed regions to benefit from AI advancemen

✓ Environmental Friendly

DecentralGPT's decentralized network reduces reliance on a single data center, which not only increases sy stem redundancy and resiliency,The environmental impact has also been dispersed. In centralized systems, large data centers consume huge amounts of power and generate large amounts of heat.Distributed syste ms, on the other hand, consist of many small, decentralized nodes, often running on local renewable ener gy.Reduced dependence on fossil fuels.In addition, decentralization also reduces the distance of data trans mission, further reduces energy consumption, and improves the energy efficiency ratio of the whole syste m.

✓ Enhanced Data Sovereignty and Control

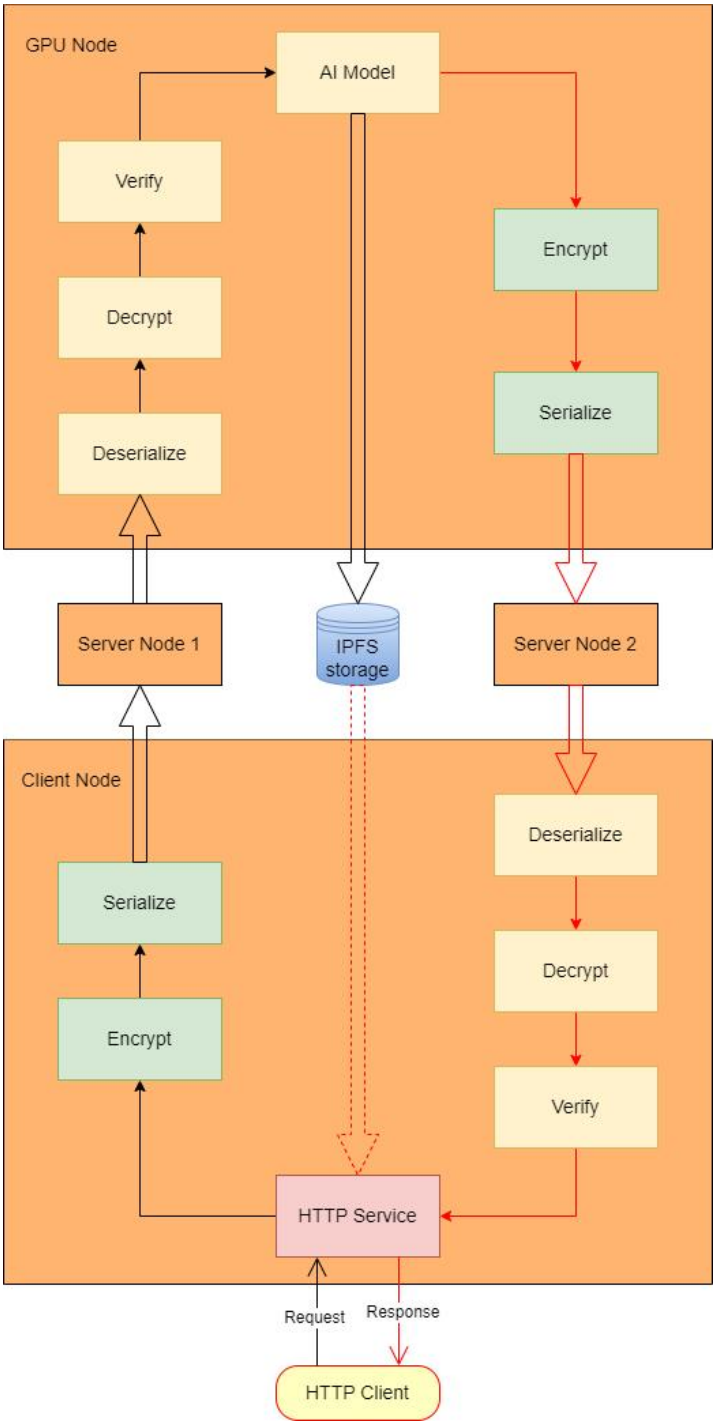
DecentralGPT provides greater data sovereignty and control through its decentralized architecture.The u ser's data is processed in the local node and does not need to be transmitted to the remote server.In this way, users have more direct control over their data and reduce the risk of unauthorized access o r abuse of data.In addition, DecentralGPT enforces strict data governance policies, supports compliance with regional regulations,Such as the European Union's General Data Protection Regulation (GDPR).This makes the system more suitable for application scenarios requiring strict data protection, such as me dical, financial and other fields.It provides users and enterprises with higher trust and compliance.

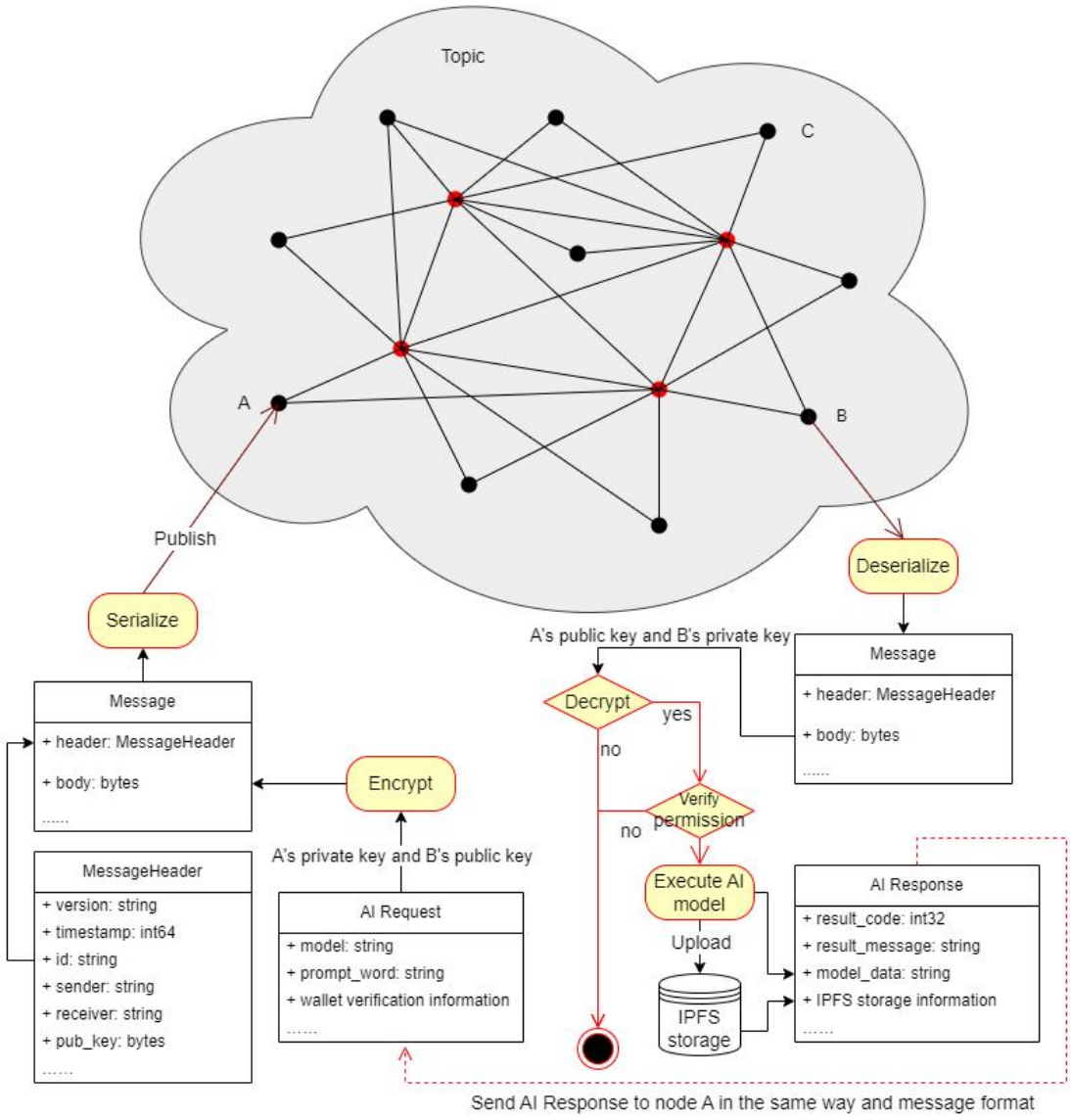
Through these unique values, DecentralGPT is more than just a technology product.It is also a

n important force to promote the sustainable development of society, economy and environm ent.

4 DecentralGPT Technical Architecture

To design a technical architecture diagram for DecentralGPT, we started with its core compon ents and how it works.The following is an overview of the DecentralGPT technical architecture and a simplified architecture diagram: **System Technical Architecture Diagram and Code Lo gic Diagram**


GPU Node
AI Model
Verify
Encrypt
Decrypt
Serialize
Deserialize
Server Node 1
IPFS storage
Server Node 2
Client Node
Deserialize
Serialize
Decrypt
Encrypt
Verify
HTTP Service
Request
Response
HTTP Client



4.1 DecentralGPT System Architecture Details

4.1.1. User Interface

Users can interact with the DecentralGPT system through the interface of any client node.The interface handles the user's requests, which can be queries, data entry, or administrative commands to the AI model.Duties of the user interface include collecting user instructions and data, encrypting this information,And sends it to the distributed GPU nodes of the system for p

rocessing.

4.1.2. Distributed Coordinator

Another function of the client node is the distributed coordinator, which can query the GPU node status of the whole network.Including task allocation and load balancing.It receives the encryption request from the user interface and selects a list of GPU nodes that meet the req uirements.Then the random machine on the blockchain randomly selects a GPU node to exec ute the task.The coordinator also monitors the performance and resource usage of each node to optimize task allocation and system efficiency.

4.1.3. Distributed Computing Node

Node composition: Compute nodes form the core of DecentralGPT, and each node is equippe d with GPU.The inference tasks of the AI model can be performed individually or collectively.T hese nodes are distributed in different locations around the world, forming a powerful distrib uted AI inference computing network.

Operating system and software: Each node runs the Ubuntu operating system or other system s.The necessary software and libraries are installed to support the running of the AI model. T his configuration ensures the compatibility and efficiency of the system.

P2P network: The nodes are connected through a peer-to-peer (P2P) network.This structure en hances the reliability and data transmission speed of the network. P2P networks facilitate dire ct data and resource sharing among peers.

4.1.4. Data storage and sharing

IPFS technology: The system uses IPFS (Interplanetary File System) as one of the solutions for data storage and sharing.IPFS is a distributed file system that stores large amounts of data a nd ensures that the data is persistent and highly accessible.

Other web3 storage public chains: interact with multiple storage public chains, encrypt and st

ore user data,Holding the private key of the data can decrypt the data end-to-end.

File storage and retrieval: All data processed through the system, including user data and model-generated data.All of them are stored through distributed storage network, which ensures the security and integrity of data.GPU nodes can efficiently retrieve and access this data.

4.1.5. Distributed GPU Machines

Distributed GPU machine: The distributed system includes a GPU node network, which is composed of distributed single nodes or cluster nodes.The GPU node program can invoke the AI model to perform inference on the GPU machine

AI model execution: The inference of AI model mainly depends on the powerful computing power of GPU.AI model can effectively use GPU for high-speed computing.

4.1.6. System Architecture Summary

The DecentralGPT system provides efficient and scalable AI model inference capabilities through its distributed architecture.By using distributed storage technologies such as IPFS and GPU acceleration, as well as powerful P2P networks,DecentralGPT is able to handle large-scale data requests while maintaining data security and privacy.The system is designed to support highly concurrent AI processing tasks while reducing latency and increasing the overall reliability of the system.

5 Core Functions of DecentralGPT

DecentralGPT, like Chat GPT, is an artificial intelligence system based on a large language model.However, its function and application are enhanced by the method of decentralization. Here are some of the core features of DecentralGPT and their detailed descriptions:

5.1. Natural language understanding and generation

DecentralGPT can understand and generate natural language,This allows it to have smooth co

nversations with users, answer questions, write articles, write code, or generate any form of te xtual content。 This function is based on advanced deep learning models, such as GPT series. It learns language patterns and knowledge by analyzing large amounts of text data.In Decentr alGPT, this capability is not limited to a single centralized server, but is performed by globally distributed nodes.It ensures the scalability and response speed of processing power, and enh ances data privacy protection through localization.

5.2. Multi-language support

In contrast to ChatGPT, DecentralGPT was designed with the importance of multilingual suppo rt in mind, allowing it to serve users worldwide.It takes advantage of the geographical and cu ltural diversity of distributed nodes to optimize and customize the processing power of differe nt languages.For example, a node in France might be better at handling French content,The n ode in Japan optimizes the processing of Japanese.This distributed and localized processing n ot only improves the accuracy of language processing, but also speeds up response time.

5.3. Personalized user experience

DecentralGPT enhances the user experience by analyzing the user's interaction history and pre ferences to provide customized responses and recommendations.This function is enhanced und er the decentralized architecture, because each node can store and process information relate d to specific users.Without the need to transmit the data back to a central server.This not onl y improves the efficiency and speed of data processing, but also increases the security and pr ivacy protection of user data.

5.4. Seamless integration and scalability

DecentralGPT allows developers and enterprises to easily integrate and extend services throug h open APIs and an extensive network of nodes.This platform supports multiple programming

languages and frameworks, making it easy and fast to integrate from small applications to large enterprise systems.In addition, due to its distributed nature, DecentralGPT can dynamically adjust resources on a global scale in response to changes in demand.Thereby providing seamless scalability.

5.5. Enhanced privacy and security

In a decentralized DecentralGPT system, user data is encrypted at the local node.Only encrypted data is transmitted over the network.This strategy greatly enhances the security and privacy protection of data, because sensitive information does not need to leave the user's geographical location.In addition, the design of the whole system adopts the latest encryption technology and security protocol.Ensure the security of data during storage and transmission.

5.6. Highly customizable user interface and experience

DecentralGPT provides a highly customizable user interface and interactive experience.Support enterprises and developers to customize the interface and functions according to their specific needs.Users can customize the interaction logic, interface style, and even functional modules according to the preferences of the target user group.Uch as adding specialized commands or integrating specific external APIs.This high degree of customization allows DecentralGPT to be better integrated into a variety of business applications and services.

With these features, DecentralGPT not only provides powerful language processing capabilities similar to Chat GPT,It also improves the efficiency, scalability, privacy and security of the system through decentralization technology.This makes DecentralGPT a powerful AI platform for diverse global needs.

6 Distributed GPU Mining Mechanism

DecentralGPT uses a distributed GPU mining mechanism, which not only emphasizes the contr ibution of computing power,But also play an important role in maintaining network liveness a nd support model development. The following is a detailed description of the mining mechan ism:

6.1 DecentralGPT's Basic Framework for Distributed GPU Mining

Total supply: 1 trillion (1000 billion) tokens, with a fixed annual mining output of 50 billion to kens.

6.2 Mining mechanism details of DecentralGPT

6.2.1. Network participation and reward conditions

To participate in mining and receive DGC rewards, miners must use long-lease mode GPU ma chines that pledge DBC tokens in the DBC network.This requirement ensures the security of t he network and the commitment of the participants.Whenever a user sends a request to one of these GPU machines, and the request is successfully processed, the machine is eligible for a DGC reward.

6.2.2. Reward Distribution Cycle

The specific mining and reward distribution mechanism for DGC tokens is as follows:

The mining reward is distributed every 600 blocks (approximately 1 hour), with a total of 5,70 7,763 DGC allocated each time.

The amount of reward each miner receives depends on the proportion of their machine's com puting power relative to the total network computing power. For example, if a miner's GPU c

omputing power is 1,000 and the total computing power of the entire network is 1,000,000, t hen the miner will receive a 1% share of the reward.

Miners can claim their reward share at any time. Once any miner receives the reward, other miners will also automatically receive their respective reward shares.

The mining reward is 50 billion DGC per year.

Miners can claim their rewards at any time. Once any miner receives a reward, all other mine rs will automatically receive their respective shares as well.

The halving mechanism for mining rewards is designed to reduce rewards by 50% every 4 ye ars, continuing for 100 years until the full 400 billion DGC reward pool is distributed.

6.2.3. Proportion of computing power and reward calculation

The specific amount of reward depends on the ratio of the computing power of each miner's machine to the total computing power of the network.For example, if a miner's GPU power i s 1000 and the total power of the entire network is 1,000,000,Then the miner will receive a 1% share of the reward. This way fairly reflects the actual value of each miner's contribution t o the network.

6.2.4. Revenue allocation between model developers and GPU miners

In this mining mechanism, the interests of model developers and GPU miners are balanced.Sp ecifically, model developers can get 30% of the mining reward to reward their efforts in devel oping and optimizing AI models.GPU miners can get the remaining 70% reward to compensat e them for the cost and effort they need to provide computing resources and maintain the n etwork.

6.2.5. Sustainability of the system and automatic destruction mechanisms

In order to maintain the long-term sustainability of the system, DecentralGPT also introduces an automatic destruction mechanism.All user payments (such as monthly fees) will be 100% automatically destroyed, which means that the relevant DGC tokens will be permanently removed from the market.Inflation is further controlled and the value of the remaining tokens is increased.

6.2.6. DecentralGPT Distributed Mining Mechanism Conclusion

Through this unique distributed GPU mining mechanism, DecentralGPT not only provides strong economic incentives for network participants,It also promotes the security and stability of the network.This mechanism ensures that the interests of participants are consistent with the overall interests of the network, and promotes the continuous development of technology and community.In addition, through DGC's token economics and reward allocation strategy,Decentral GPT builds an ecosystem that is scalable, efficient, and self-sustaining.

7 DGC Tokenomics Model

DGC tokens are the core economic units of the DecentralGPT platform, designed to support t he operation of its decentralized AI network. Our economic model is built on a multi-dimensi onal framework, integrating deflationary strategies, incentive mechanisms, and sustainable deve lopment concepts. The total supply of DGC tokens will be released over 8 years, reaching 1

trillion (10000 billion) tokens.

7.1 DGC Token Allocation

7.1.1. Total supply and distribution

Total Token:

The total supply of DGC in the first 4 years is 1 trillion coins, with an additional 50 billion coins mined annually thereafter. All DGC tokens paid by users will be 100% burned. 60% of the tokens are issued on the Binance Chain, while 40% are issued on the DBC EVM chain.

Team:10%

- Supply(billions):100
- Before TGE:0%
- Unlocking:12 month cliff , 36 month linear vesting

Seed Round:10%

- Supply(billions):100
- Before TGE:0%

- Unlocking:12 month cliff , 24 month linear vesting

A Round:5%

- Supply(billions):50
- Before TGE:0%
- Unlocking:12 month cliff ,24 month linear vesting

Node Operation :5%

- Supply(billions):50
- Before TGE:0%
- Unlocking:
  - Node Sale: 1 month cliff,20 month linear vesting

.

Airdrop:5%

- Supply(billions):50
- Before TGE:5%
- Unlocking:0 month cliff, 20% unlock,8 month linear vesting

Mining For GPU:20%

- Supply(billions):200
- Before TGE:0%

- Unlocking:
  - For the first four years, the total mining output will be 200 billion DGC.
  - Thereafter, the annual mining output will remain at 50 billion DGC.DGCTo participate in GPU mining,
  - you need to hold an NFT node.The mining rewards will commence within 0 to 6 months after the launch of DEX or CEX.10% of the mining rewards unlock immediately, and the rest follow a 180 day linear unlocking schedule.

Liquidity :5%

- Supply(billions):50
- Before TGE:5%
- Unlocking:
  - Node Sale: 0 month cliff,100% unlock

Foundation:10%

- Supply(billions):100
- Before TGE:0%
- Unlocking:2 month cliff , 40 month linear vesting

Ecosystem &Marketing:19.5%

- Supply(billions):195
- Before TGE:9.72%
- Unlocking:0 month cliff , 40 month vesting,unlock 9.72% before TGE

Staking Reward:6%

- Supply(billions):60
- Before TGE:0%
- Unlocking:1 month cliff , 6 month linear vesting

Mining Race:4.5%

- Supply(billions):45
- Before TGE:0%
- Unlocking: 0 month cliff , 10% of the mining rewards unlock immediately, and the rest follow a 180 day linear unlocking schedule

7.1.2. Deflation mechanism

DGC adopts a strong deflation mechanism, that is, 100% of the user's monthly and quarterly fees are destroyed.This means that all DGCs paid through subscription services will be perman ently removed from the circulation market, thereby reducing the total amount of tokens in cir culation.Increase the scarcity and potential value of tokens.

7.2. DGC Mining and Rewards

- ✓ **Mining Cycle**
- ✓ **Halving mechanism**

  The halving mechanism of mining rewards is designed to be halved every four yea rs for 100 years until 400 billion rewards are completed.This long-term halving stra tegy helps keep the value of the token stable and growing over the long term.

✓ **Distribution of rewards**

70% of the mining output is allocated to miners who provide computing power, a nd 30% is allocated to developers who participate in the development of large m odels.This allocation method aims to balance the relationship between technology contribution and resource input, and stimulate the production of more high-quality AI models.

8. Roadmap and Plan

Q1 2025 Scale

- Growth marketing
- DGC Public Sale
- Providing foundational API for AI agent
- Memory optimization, supporting long-term memory
- Supporting inference models similar to GPT-o1 (e.g. Llama 4.0)

Q2 2025 Growth

- Maintain community and user growth
- Supports Canvas
- Supports various document formats
- Supports learning and summarizing content
- Provides comprehensive API for AI Agents

Q3-4 2025 Surge

- Empower more AI Agents to grow
- Deploy node clusters to Europe and Africa

- Supports LLM control of computer interfaces with 70% accuracy
- Supports real-time voice functionality
- Supports inference models similar to GPT-o3
- Supports video call
- TGE

Q1-2 2026 Empower

- General identified as the infrastructure to AI Agents
- Supports LLM control of computer interfaces with up to 90% accuracy
- Supports virtual avatar images for video conversations

Q3-4 2026 Maintain

- Video conversations support virtual avatar images
- Achieves preliminary AGI, supporting any modality of input and output