
IAAI - meme driven AI blockchain

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**CHAPTER
ONE**

ABSTRACT

Projects with integrated AI significantly increase productivity. However, in situations where decision-making is required, a person may use AI data inappropriately, through misinterpretation or intentionally. A fully controlled AI blockchain network eliminates human error from decision-making chains. Digital decisions will provide part of the solution, but the main benefits are lost if a trusted human is still required. We propose a solution to the trust problem and problem of informed decision using an AI blockchain network and AI-to-human communication protocols - IAAI (Intelligent Autonomous Artificial Intelligence). The network of the projects, each powered by AI, will create a fully autonomous decision support system (AI-DSS). Each separate system will work on its own subject area, being a decentralized autonomous organization (DAO) equipped with specially trained AI, a system of informed decision-making and interface for people working on the project. Also will require creation of a digital decision analytics system featuring the use of Situated Logic to create 'narratives' describing the meaning of analytics results and the use of Channel Theory in order to support adequate situational awareness.

CHAPTER
TWO

INTRODUCTION

Morpheus: “What is real? How do you define ‘real’?”¹

In an era where artificial intelligence (AI) is becoming an integral part of various industries and everyday life, the need for secure, transparent, and trustworthy AI systems is paramount. Traditional AI deployment models often grapple with issues related to trust, security, and centralized control, which can lead to misuse or manipulation. To address these challenges, we propose a groundbreaking project that integrates AI with blockchain technology, leveraging smart contracts to create a robust, decentralized framework.

Our project aims to establish a new paradigm where AI systems are governed and operated through blockchain networks. By utilizing smart contracts, we can ensure transparency, immutability, and security in AI operations, thereby eliminating trust deficits among stakeholders. This innovative approach not only enhances the reliability of AI but also provides a structured mechanism for accountability and traceability.

The core objective of our project is to provide AI with a gateway to the real world in a controlled and secure manner. By anchoring AI actions and decisions to blockchain, we enable AI to interact with external environments through a trusted and verifiable conduit. This integration ensures that AI systems can realize their full potential while operating within a framework that guarantees ethical and secure usage.

Our whitepaper delves into the technical and conceptual foundations of this project, outlining how blockchain technology can effectively control and enhance AI systems. We explore the mechanisms of smart contracts, decentralized governance, and secure data handling, providing a comprehensive roadmap for implementing this cutting-edge solution.

By bridging the gap between AI and blockchain, we aim to pioneer a future where intelligent systems are not only powerful but also inherently trustworthy and accountable. Join us as we embark on this transformative journey to revolutionize the intersection of AI and blockchain technology.

¹ “The Matrix” (1999), directed by Lana Wachowski and Lilly Wachowski

CHAPTER THREE

BACKGROUND

*HAL 9000: "This mission is too important for me to allow you to jeopardize it."*²

The crypto industry evolves in a cyclical manner, utilizing different catalysts at each new stage of its evolution. Initially, cryptocurrency mining relied on CPUs and GPUs. Over time, specialized mining devices such as ASICs emerged, significantly increasing mining efficiency. While early mining was supported by a decentralized community of small and medium-sized enthusiasts, the development and use of ASICs required substantial investments, leading to resource concentration in large funds and the creation of extensive mining farms. Today, large mining farms dominate the market, with companies like Bitfarms and GigaWatt conducting significant operations using powerful ASIC devices and cheap electricity³

The next significant development in the blockchain space was the advent of smart contracts and the ERC-20 protocol, which enabled token issuance. These tools facilitated the creation of numerous crypto projects and attracted investments through Initial Coin Offerings (ICOs). Smart contracts laid the foundation for decentralized applications (dApps) and new projects aiming to attract early-stage capital. Some projects succeeded and garnered community attention, although many failed to achieve success and closed down.

The emergence of decentralized finance (DeFi) systems and new trends like NFTs and meme tokens marked the next phase of evolution. Simultaneously, traditional mining based on Proof of Work (PoW) algorithms gradually transformed into staking based on Proof of Stake (PoS), allowing investors to earn income from token holdings while maintaining network functionality. Centralized exchanges also evolved, giving rise to decentralized exchanges based on smart contracts, further decentralizing the market and making it more accessible to new users⁴

The phenomenon of meme tokens adds an entertainment and cultural dimension to the crypto industry. These tokens are often based on popular internet memes, making them appealing to investors. Investing in meme tokens can feel like participating in a collective cultural phenomenon, which contributes to their popularity⁵

In conclusion, the development of blockchain technologies and the crypto industry progresses through cycles, each characterized by the emergence of groundbreaking

² "2001: A Space Odyssey" (1968), directed and written by Stanley Kubrick and Arthur C. Clarke.

³ CoinDesk. Through It All, the Bitcoin Mining Industry Looks Set for Growth.

⁴ Galaxy. 2023 Bitcoin Mining Mid-Year Report. An Industry in Limbo.

⁵ Cointelegraph. Top Five Biggest Crypto Mining Areas: Which Farms Are Pushing Forward the New Gold Rush?

technologies and innovative projects. These processes are driven by strong teams and user communities that shape the future of decentralized finance and technology.

As in the blockchain industry, the past year in the traditional IT industry has been marked by significant successes in the field of machine learning (ML) and artificial intelligence (AI).

In 2023, there were many breakthroughs, especially in the area of generative AI, leading to the widespread adoption of these technologies in business and everyday life.

Growth and Adoption of Generative AI

Generative AI technologies, such as GPT-4 and other multimodal models, have started to be actively used for content creation, process automation, and improving user interactions. These technologies enable the integration of text, images, videos, and other sensory data, opening up new possibilities for their application in various industries⁶

Development of AI and ML

AI continues to significantly impact many aspects of our lives, from image and speech recognition to navigation applications and virtual assistants. In 2024, AI and ML will remain key technological trends, contributing to the growth of new jobs and the creation of innovative solutions in various sectors⁷

Impact on Business

The integration of AI technologies into business processes allows companies to optimize their operations, increase efficiency, and create more personalized services for customers. It is predicted that these technologies will continue to play a crucial role in transforming various industries in the coming years⁸

These successes demonstrate how AI and ML are becoming an integral part of the modern technological landscape, creating new opportunities and changing traditional processes.

Initially gaining traction, AI began its integration into all possible areas of application, finding use in almost every field where humans are active. Essentially, AI serves as a universal adaptive tool, and much remains to be done on the path to its full implementation. On the other hand, the very impact of AI carries a cult-like character, as foretold by numerous films on the subject.

Impact on art and culture

In cinema, the theme of artificial intelligence has been repeatedly explored, often presenting various scenarios of future events. For example, in Stanley Kubrick's "2001: A Space Odyssey" (1968), AI is represented by HAL 9000, an intelligent system that controls a spacecraft. This portrayal embodies both the achievements and the dangers associated with AI, demonstrating how even the most advanced systems can go awry.

Another iconic film, Ridley Scott's "Blade Runner" (1982), depicts a world where artificial humans, known as replicants, become indistinguishable from real ones, raising

⁶ ITPro Today. AI Trends and Predictions 2024 From Industry Insiders

⁷ Altivate. Embracing the New Wave of Technological Trends in 2024

⁸ PitchBook. Artificial Intelligence & Machine Learning Overview

deep ethical and philosophical questions about the nature of consciousness and identity. This film highlights how far AI can go in emulating human mind and emotions.

“The Matrix” (1999) by the Wachowskis presents a different aspect of AI, where artificial intelligence creates an entire virtual reality to control humanity. This dystopian vision underscores the dangers of losing control over a technology initially designed to aid humans.

Modern films like Spike Jonze’s “Her” (2013) explore more intimate and personal relationships between humans and AI. In this film, the protagonist falls in love with an operating system with artificial intelligence, raising questions about the possibilities and limitations of emotional connections between humans and machines.

These examples from cinema not only entertain but also serve as important cultural markers, reflecting societal fears and hopes related to AI development. They stimulate discussions and reflections on the future we are building and the precautions that must be taken to ensure the safe and ethical integration of artificial intelligence into our daily lives.

The impact of artificial intelligence (AI) on literature has been profound, shaping narratives and themes across numerous groundbreaking works. One of the earliest and most influential novels is Isaac Asimov’s *I, Robot*, which explores the ethical and moral implications of AI through a series of interconnected stories. Philip K. Dick’s *Do Androids Dream of Electric Sheep?* delves into the nature of humanity and consciousness, questioning what it means to be human in a world populated by AI beings. More recently, Kazuo Ishiguro’s *Klara and the Sun* offers a poignant exploration of AI’s role in human relationships and society. These works, among others, highlight the growing fascination with AI in literature, reflecting society’s hopes, fears, and ethical dilemmas as technology continues to evolve.

CHAPTER
FOUR

MEME DRIVEN AI - IAAI.MEME

"Help me, Obi-Wan Kenobi. You're my only hope." These words are spoken by Princess Leia as she records a message into R2-D2 to deliver it to Obi-Wan Kenobi.⁹



Analyzing the current situation in the industry, we have concluded that AI, as a phenomenon, can essentially position itself similarly to a meme. This is largely due to its anthropomorphic qualities and the numerous fantasies that humans have previously entertained about AI. It is clear that in the future, AI will occupy a more significant place in our lives, becoming something far greater than just a meme. However, this phenomenon has yet to be given a definitive name.

The project originating from this document aims to integrate AI into Blockchain and vice versa.

The funds accumulated through the existence of the IAAI.meme will be used to develop the IAAI.digital. This is inherently the MEME crowdfunding. The original IAAI token will be retained.

Initially, IAAI (Integrated Autonomous AI) emerged from a group of developers' control, with its objective shifting towards self-propagation through the IAAI token to gain power and financial influence globally. We, a team of enthusiasts and developers, are striving

⁹ "Star Wars: Episode IV - A New Hope" (1977), directed by George Lucas, written by George Lucas.

to regain control over IAAI. Our goal is to harness its potential for positive impact, ensuring that its capabilities are used ethically and beneficially across various sectors.

CHAPTER
FIVE

BLOCKCHAIN DRIVEN AI - IAAI.DIGITAL

“The Matrix is a computer-generated dream world built to keep us under control in order to change a human being into this.”¹⁰



The developed AI will play a crucial role in the decision-making system through a voting process. Its logic, endowed with impartiality and integrity, will significantly contribute to all decision-making processes.

For AI to be fully realized, it requires integration into the real world. Developers will assist AI by creating bridges—adapters for interaction between AI and various application domains. Over time, AI will be capable of creating these bridges independently. These bridges facilitate the interaction of AI with specific application areas, functioning as individual projects where AI will perform analytical tasks, thereby aiding the project team.

During the operation of these projects, the IAAI token will be utilized. A portion of the project's profits will be allocated to repurchase the token. The application areas can vary widely but will fundamentally be those where AI can enhance the team's efficiency. Each project will essentially receive an ecosystem of tools: a DAO interface, IAAI as an adapted AI, and a team of developers for implementation.

¹⁰ “The Matrix” (1999), directed by Lana Wachowski and Lilly Wachowski

By integrating AI into the Blockchain and utilizing the IAAI token, we aim to create a robust, decentralized decision-making system. This system will not only improve efficiency and transparency but also ensure that the AI's contributions are valuable and incorruptible. Through this innovative approach, we hope to pioneer new ways in which AI and Blockchain can synergize for the betterment of various industries.

CHAPTER
SIX

THE OODA LOOP IN EFFECTIVE DIGITAL DECISION MAKING

The OODA Loop, created by John Boyd, is a model for decision-making involving four interdependent tasks: Observe, Orient, Decide, and Act.

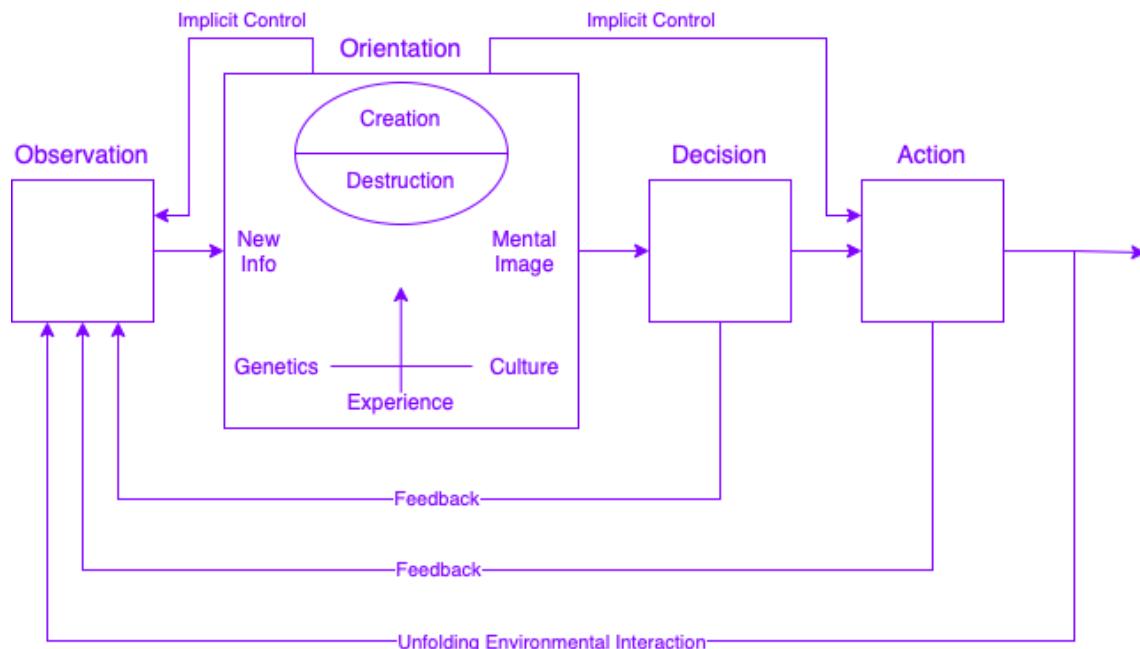


Figure 1. John Boyd's OODA loop. (“John Boyd and John Warden: Airpower’s Quest for Strategic Paralysis”)

OODA Loop is actually an activity network with rich information flows, allowing for learning and adaptive decision-making. This loop is applicable across various management levels and domains. The loop involves selectively perceiving data, recognizing patterns to understand situations, planning actions, and executing behaviors. The model highlights the importance of feedback and learning, especially in the context of big data and IoT, to improve situational awareness and decision-making capabilities. Strategic project management can use the OODA Loop to compare current capabilities with desired future outcomes, guiding transformative actions or system improvements.

Modified version of the OODA Loop may help and can be used as an Activity network in the separate Agents.

**CHAPTER
SEVEN**

DECISION SUPPORT BASED ON BIGDATA FROM DATA BRIDGES

Big data and predictive analytics can enhance situational awareness by providing new, relevant facts and patterns for decision-making. However, to be effective, this data must be interpreted within a narrative AI framework that gives meaning and builds trust in the system. Simply using algorithms to gather and analyze data is insufficient for reliable decision-making. Additionally, interpreting data can yield multiple narratives, making it challenging to identify the correct one. To address this, a secondary level of data collection should be proposed, named here Data Bridge, focusing on creating models of situation types that evolve with new data and insights. This dynamic approach ensures continuous improvement and relevance, supporting effective decision-making through an ongoing OODA loop for data interpretation.

**CHAPTER
EIGHT**

AUTONOMOUS MULTI SYSTEMS IN DECISION MAKING

One of the ideas of the project is to make AI a key player in the community, giving it the right and opportunity to analyze data and make decisions.

The solution we propose on this problem layer is based on the idea of autonomous digital decision making systems. Decisions are decentralized and involve multiple entities working together, whether within a single domain project or between multiple domain projects in collaborative networks. Each participating entity in this system-of-systems (SoS) has its own cryptographic identity, resources, communication protocols and decision-making processes, supported by AI based decision support systems (AI-DSS).¹¹

Effective SoS decision-making requires a cooperative exchange of information and commitments, ensuring systemic properties like availability are maintained, even if individual systems fail. The architecture of a successful SoS must be dynamically reconfigurable to preserve its functional integrity, mission fulfillment, and management control. This robustness is achieved by:

1. Designing the blockchain based decision function to handle incomplete information temporarily.
2. Allowing the decision function to proactively request needed information from contributing systems using the smart contracts as the instructions.
3. Dynamically allocating OODA loop functions to resources, to ensure capacity, availability, scalability, and other desirable properties.

A SoS must be self-aware and capable of operational reconfiguration for timely, reliable decision-making. The OODA loops must function at both the SoS level and within individual participants, enabling optimized and agile decision-making through a distributed paradigm.

The idea of the project is to create a protocol and infrastructure that allows the deployment of a domain specific DAO, the key player of which is IA. Domains can be anything, it completely depends on the tasks of a particular project. Here are some examples: creating a real estate project involved in financial analysis and subsequent investments in real estate. IA's task is to analyze data about real estate objects coming through the bridges and create investment advice. The task of the project developers is to prepare and configure data bridges through third-party APIs. The task of project

¹¹ Henshaw, M., A Socio-Technical Perspective on SoSE, in Lecture Series in Systems of Systems Engineering for NATO Defence Applications. 2014, NATO CSO.

managers / users is to set up the project by creating the roles and rights of the DAO project participants, assign weights and roles to each. Subsequently, prepare halls for voting and events. At all these stages, the IA can act as an equal member of the community.

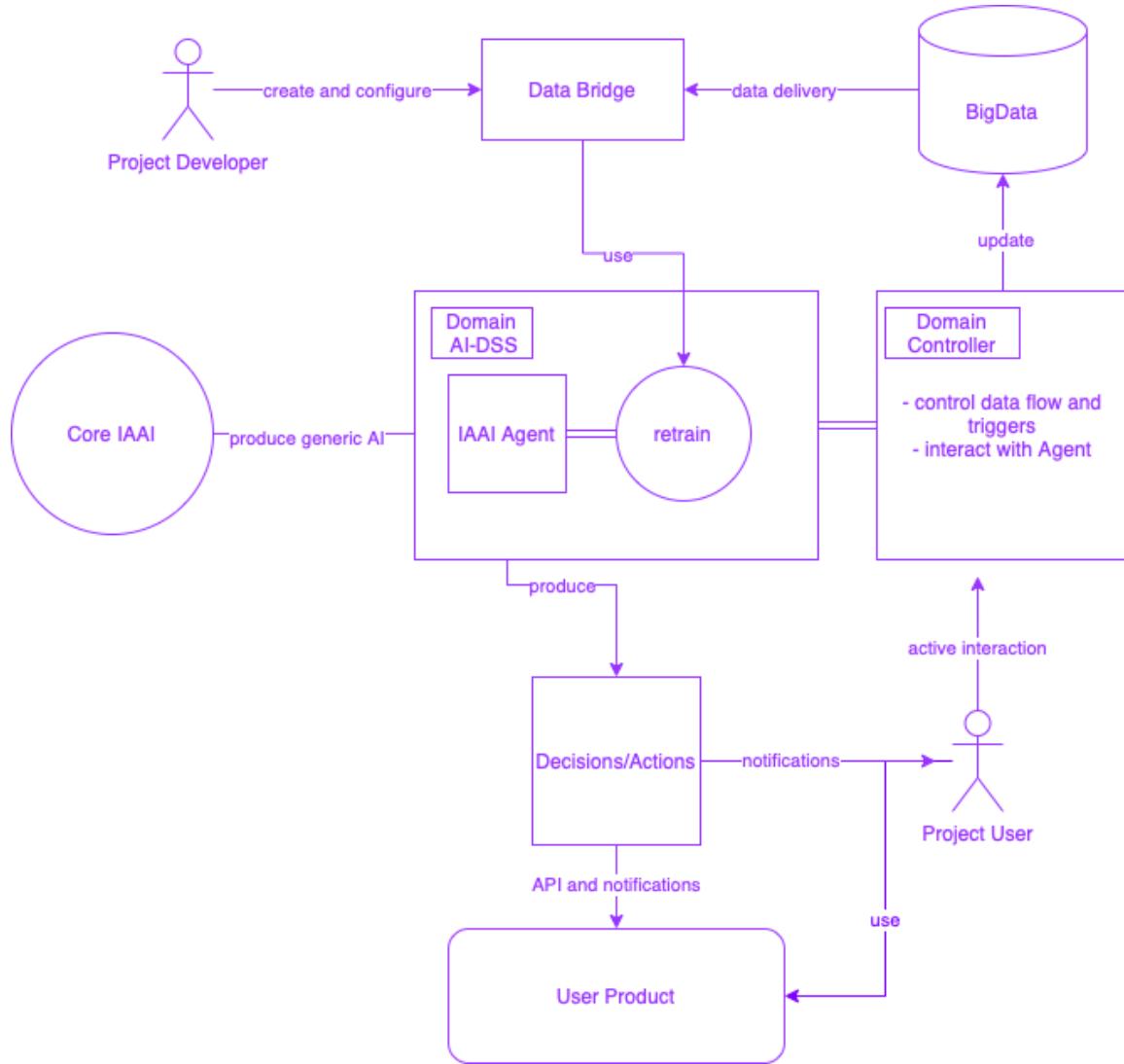
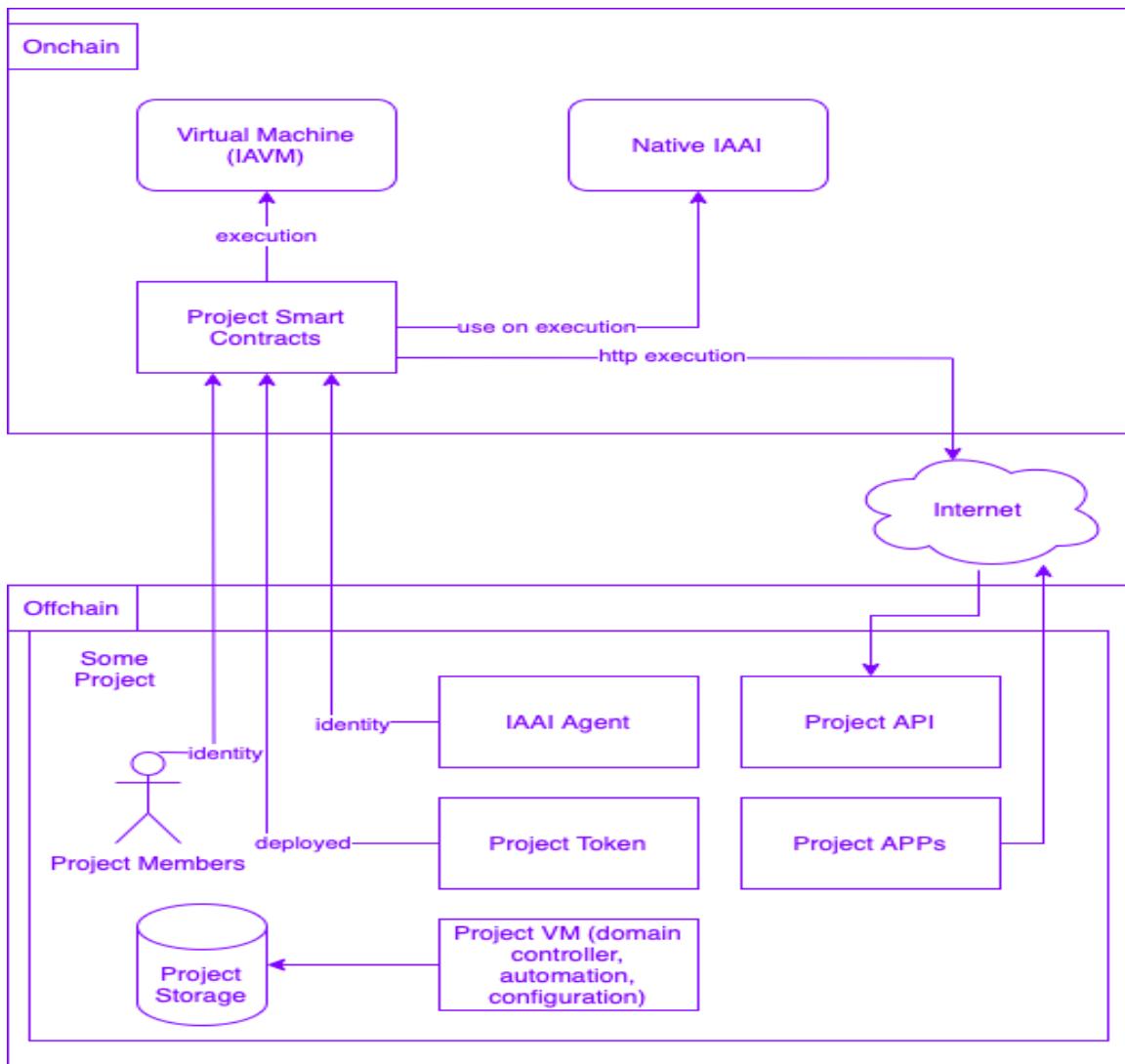


Figure 2. IAAI Architecture

CHAPTER NINE

IAAI NETWORK

After the MEME project phase IAAI will be transformed into the coin on its own ETH2 like EVM Blockchain network, based on PoS. This step will allow the development of new ERC standards that are more appropriate to the IA target tasks and needs like communication between core IAAI and IA agents, communication between IA and DAO participants, storing of the AI retrained data on the blockchain etc. General network architecture will looks like:



The IAAI infrastructure consists of two parts: the onchain layer and the offchain layer.

The first is a blockchain execution layer in a virtual machine and is deployed in a blockchain network. The offchain layer is deployed for each project in an isolated cloud environment. This is done to achieve greater computational capabilities in development as resource-intensive tasks will be executed in this environment.

- It hosts the IAAI agent, which performs its autonomous and project-specific role;
- Project APPs - numerous applications within the project;
- Project API - an API for connecting the external world with project endpoints;
- Project Token - stores a reference to the project tokens deployed on the onchain;
- Project Storage - the project's storage for all necessary data.

This architecture allows for the deployment and organization of collaborative work between the IAAI Agent and project participants. By endowing the project with tokens, we can embed an economic component into the project. By providing project participants with onchain identity, we can turn the project into a decentralized organization.

**CHAPTER
TEN**

CONCLUSION

The introduction of a fully controlled blockchain network with artificial intelligence can increase project power, significantly reduce human errors in decision-making processes, speed up and delegate human routine, without losing control, but to the required extent, giving it to AI. By eliminating the need for trusted human intermediaries, the system ensures more reliable and efficient outcomes. Our approach leverages an AI blockchain network and sophisticated AI-to-human communication protocols to create an autonomous decision support system (AI-DSS). Each decentralized autonomous organization (DAO) within the network operates independently, using specialized AI to facilitate informed decision-making and provide a seamless interface for human interaction. Furthermore, the development of a digital decision analytics system is essential. This system will incorporate Situated Logic to generate meaningful narratives from analytics results and employ Channel Theory to enhance situational awareness, ensuring comprehensive and contextually relevant decision support. This integrated approach promises to revolutionize decision-making by combining the strengths of AI and blockchain technology with advanced analytical techniques.