



Skynet-Blockchain

Low environmental impact decentralized AI solutions

The increase in global digitalization brings with it many improvements in the quality of the environment and people's lives. At the same time, new challenges need to be solved to optimize the processes of acquiring and processing information that are currently disrupted and not fully expressed for their intrinsic value. Collecting this smart data in a secure, unchangeable manner over time and delegating their management to the public consensus of the blockchain infrastructure connected with artificial intelligence allows us to generate value from data and result in disruptive innovation.

It has now been 10 years since the advent of new technologies such as blockchains and in this time frame we have been able to verify and validate their operation. New concepts and paradigms have come to be created from them and it seems to us that the time has come to start exploiting these technologies to support humanity along its evolutionary path, helping it to find solutions to increasingly complex problems closely linked to our future. Skynet-Blockchain is a project born from the initiative of skynet-network, a new born global organization

that which aims to create a network of knowledge sharing and information exchange with a green soul. The project is based on the following paradigm keys: decentralization, immutability, resilience, scalability, artificial intelligence, interoperability, decentralized ledger, opensource, community, process optimization, reduction of environmental impact.

"We cannot solve our problems with the same thinking we used to create them"

A. Einstein

Macro areas of the project Skynet-Blockchain:

SMART DATA

A continuous no-stop flow of information from all over the world that needs to be explored and exploited. Smart Sensor, IoT, Smart City, Medical Sensors, DApp, Real World Data, Business Economic data.

BLOCKCHAIN

Decentralized, scalable, permissionless, self-democratic infrastructure cryptographically secure by design. The data-flow management in and out the blockchain is safe, reliable and transparent.

ARTIFICIAL INTELLIGENCE

The guarantee of persistence and immutability of data collected on the blockchain allows artificial intelligence to give its best, working on secure, shared and constantly updated smart datasets.



New solutions for increasingly complex problems

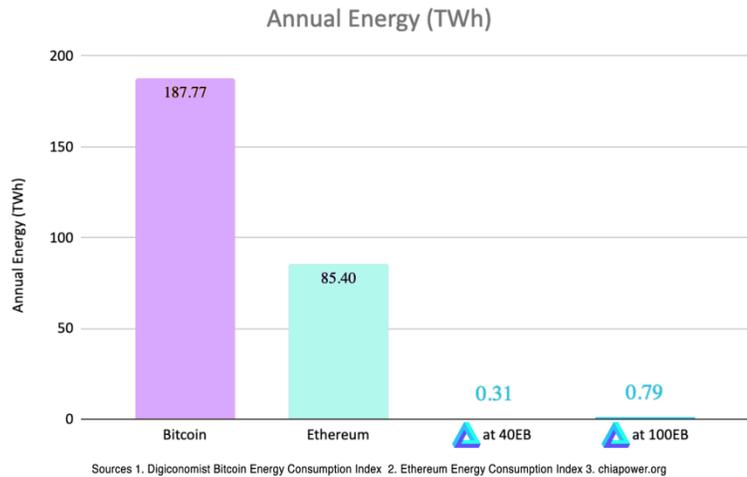
Proof of Space and Time (PoST) blockchain

Blockchain technology consists of a shared and immutable ledger to record data transactions block after block, consolidating a relationship of trust. Security and integrity, guaranteed by design, will keep data safe from known and emerging threats.

Previous Proof-of-work (PoW) technologies, such as Bitcoin or Ethereum have demonstrated and continue to prove them correct functioning, but at the expense of a substantial energy consumption capable of supporting the whole infrastructure, through processes named mining. Each new block is a new computational work and consequently the energies previously used will be lost.

Skynet-Blockchain adopts a new model of consensus called Proof of Space and Time (PoST) [1][2].

Unlike its predecessor POW, the new PoST consensus model, exploits the space of our hdd by preallocating ".plots" files to ensure the infrastructure security. In this way previously used energy is ready and usable for each block of the chain, which can be shared with several blockchains at the same time. All this translates into a great saving in energy consumption and less CO2 production. The infrastructure thus conceived is capable of self-sustaining and being totally decentralized. It is made up of three main players: the node, the farmer, the timelord. Both cooperate in realtime via peer-to-peer network protocol.



TOKENIZATION SYSTEM:

- Farmer reward 1/8 of block value
- Pool reward 7/8 of block value
- Timelord fee 0.1/100 of block value

FARMING (aka mining):

- New HDD mining solution
- K >= 32 minimum plot size
- Pooling protocols
- Gui and Cli user interface
- Cross-platform Win, Mac, Linux
- Chia™ NFT and OG plots compatible

Table 1. Technical specifications skynet-blockchain v1.0.0

Feature	Description
Type of blockchain	Proof of Space and Time (PoST)
Block time	Average time of 18.75 seconds
Genesis start date	2021/10/29
Halving stages	Every year
Cryptocurrency	XNT Token

[1] Abusalah, Hamza; Alwen, Jo; Cohen, Bram; Khilko, Danylo; Pietrzak, Krzysztof; Reyzin, Leonid (2017). "Beyond Hellman's Time-Memory Trade-Offs with Applications to Proofs of Space" (PDF).
[2] Cohen, Bram; Pietrzak, Krzysztof. "Simple Proofs of Sequential Work" (PDF). *Simple Proofs of Sequential Work*.

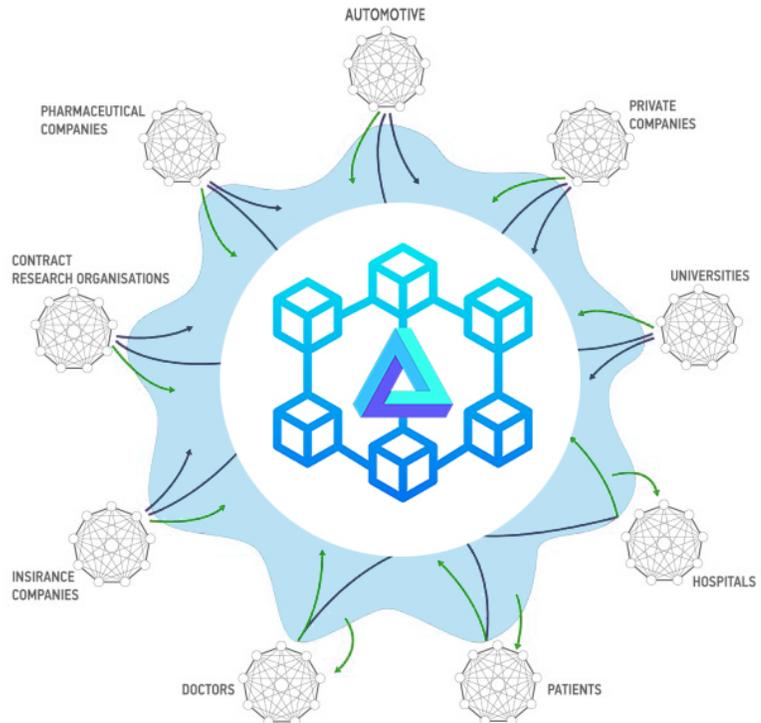


Smart data science and Skynet-Blockchain

Smart Sensor, IoT, Smart City, Medical Sensors, DApp, Real World Data, are just some of the examples that we could cite to define a whole class of acted objects that generate information and with it value. The idea of making data secure, resilient and easily shareables lays the foundation for new paradigms of circular economy, where sharing and ownership of the data can be freely traded and controlled throughout their entire life cycle.

Many industries can benefit from these new concepts, and cooperate together to achieve their goals in a more efficient and integrated way to fix problems in the real world. Delegate to a public and decentralized Infrastructure the task of managing these flows will allow the actors to save time and resources without having to sacrifice security and transparency.

Whether you are a pharmaceutical company, automotive company, a university, a research team, a private company, a public hospital, a patient or a doctor makes no difference. You will be able to use skynet-blockchain like decentralized platform for managing your smart data and contributing to training and/or sharing of public and/or private datasets.



A new smart data economy

Each single data entered in the skynet-blockchain belongs to one or more well-defined entities.

From this basic concept we can deduce that the ownership and sharing of this data is fully compatible with a token-based economy, where every single data can acquire a well-defined value, democratically recognized and easily exchanged with other members of the infrastructure. The security attribution of ownership by design of the blockchain allow its members to acquire and/or insert smart data whose value is no longer lost, but rather enhanced and aggregated in order to be able to take advantage of it, whether for problem solving or purely economic scope.

Let's take an example:

subject X start to acquire various smart data through a series of private objects, such as smart sensors and IoT. All these acquired smart data are processed through dApps (decentralized applications) and sent in the skynet-blockchain infrastructure. Once the data has been entered, their property will be well defined and uniquely attributable to subject X. Now X will be able to decide whether to query this data with the aid of technologies such as artificial intelligence in order to obtain added value or share them all or in part with different subjects Y, Z, n which will be able to access it in a remunerative exchange towards the subject X.



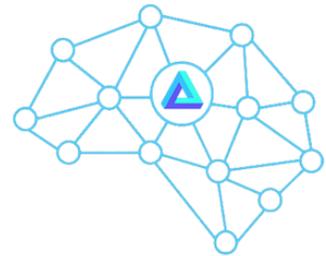
A.I. over Skynet-Blockchain

Collecting and making data available in a secure and decentralized way is only the first step. They don't always represent what our wits try to see, sometimes we need to think differently.

This is where the combination of blockchain and artificial intelligence comes into play. An infrastructure potentially infinite, decentralized, reliable, resilient and safe to draw on through artificial intelligence, in search of hidden solutions.

SMART DATA INCLUDES:

- Environmental data and sensors data
- Medical data and sensors data
- IoT and industry 4.0 data
- Real life data
- Automotive data
- Smart build sensor
- Smart city data
- Financial business data



Decentralized A.I.

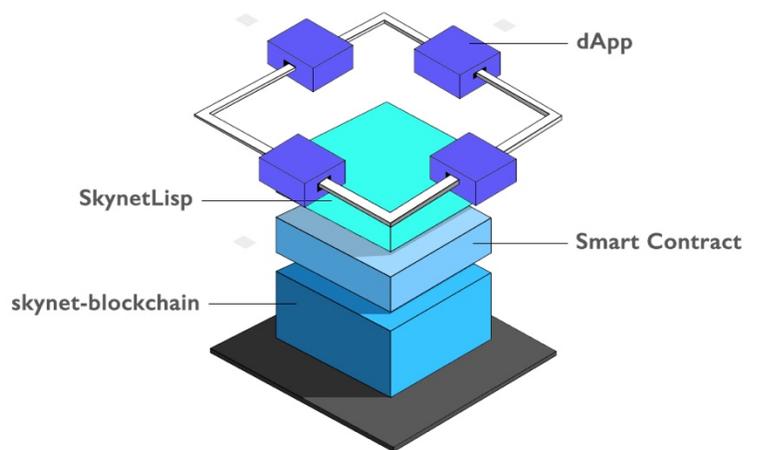
A further implementation can be seen in the decentralization of trained models inside the skynet-blockchain platform, generated by automated data acquisition. This could give rise to a completely autonomous self-learning decentralized artificial intelligence residing inside the same infrastructure.

SkynetLisp, the power of smart-contract

Language and on-chain programming environment to building smart transactions. Completely sandboxed, interoperable and composable, SkynetLisp allows to create advanced objects in the skynet-blockchain such as colored coins, singletons, DeFi and much more.

Synthetic A.I. dApp Q2-22

Through the creation and use of dApps (decentralized applications) such as Synthetic A.I. you will have the opportunity to interact with one or more specific sectors of smart data present in skynet-blockchain, to apply them innovative technologies such as artificial intelligence, machine learning, deep learning. Thanks to it we can extrapolate deep patterns, or use such decentralized datasets as real gyms to train our ai-models like speech recognition, NLP, visual recognition, text recognition, etc..



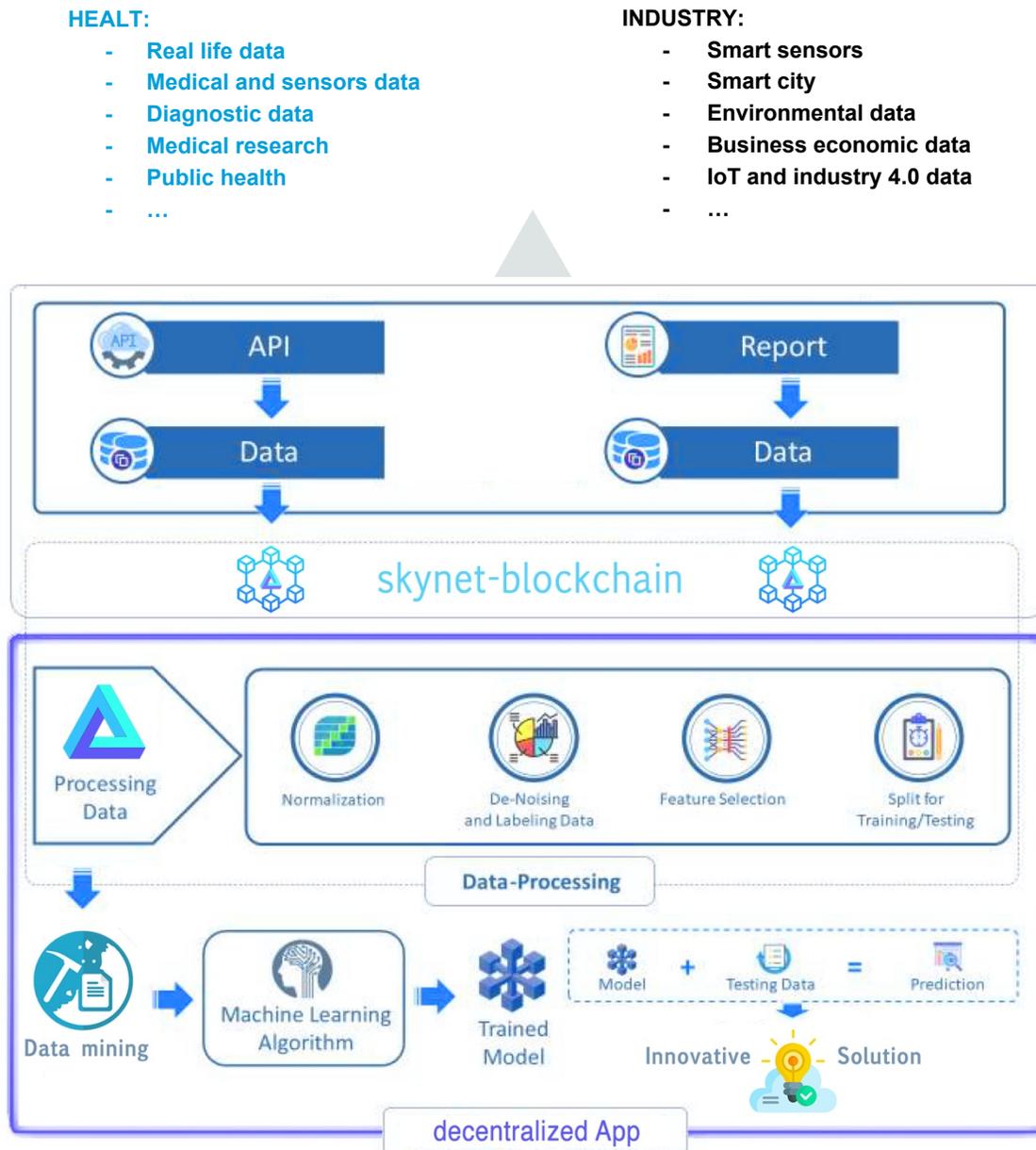


Synthetic A.I. smart data workflow

Access and processing data contained in Skynet-Blockchain will be possible through Synthetic A.I. dApp, and its libraries.

The decentralized application will take care of establishing a secure and resilient channel with the infrastructure and through it access to specific data and services. Only data that is directly or indirectly owned can be acquired and processed. The data flows managed by Synthetic A.I. can be both inbound and outbound.

Integration with specific third-party libraries and applications for artificial intelligence will allow Synthetic A.I. to act as a bridge between the blockchain and artificial intelligence algorithms.





Skynet-Network

Sharing of knowledge and active participation in the project are just two of the many aims of the global association Skynet-Network. Promote, cooperate and make known to all interested realities, both public and private, the opportunities and project purpose and the disruptive conjunction between blockchain and artificial intelligence.

Case studies and real usage scenario:

Finding innovative solutions to really existing problems through the practical implementation of these technologies in real contexts. In the period between Q2-22 and Q4-22 a program of experimentation case study and real usage will be activated through the collaboration with public and private companies in many sectors of interest.

Trust by Design

The guarantees and securities inherited from the blockchain paradigm will allow establishment of connections and relationships in the real world based on mutual trust and transparency.

Working all together we can achieve goals that were unimaginable until yesterday.

Conclusion

The many opportunities that blockchain and A.I. can offer are still to be explored and almost endless. We believe that by creating a collective, decentralized and extended data incubator we will be able to correlate different scenarios and different solutions completely unknown today.

This document can be seen as an introductory manifesto to the skynet-blockchain and skynet-network projects. Its drafting and updates will reflect the actual project development in a concrete and constant way over time.

For More Information:

Web <https://skynet-network.org>

Email comunication@skynet-network.org

Twitter https://twitter.com/Skynet_Network_

Discord <https://discord.gg/8atUub5E5h>

Github <https://github.com/SkynetNetwork/skynet-blockchain>

Last revision: 2021/11/05