A neural network in every home!

We would like to bring to your attention the Skychain project. It will provide an open infrastructure based on blockchain principles and enable development, training, and use of medical neural networks. Skychain's goal is to facilitate transactions between four groups of participants:

- Owners of medical big data required for neural network training;
- Developers of medical neural networks;
- Doctors and patients interested in accurate diagnoses made by artificial intelligence;
- Crypto miners, who can provide their computational resources.

IBM estimates that the artificial intelligence market in the healthcare industry can reach $200 billion in several years. Skychain aims at grabbing 70 percent of that market by providing an open infrastructure to combine the resources of many participants. Thanks to that approach, Skychain can outperform any closed, proprietary product.

Medical neural networks

Neural networks can already diagnose diseases on par with the best doctors by analyzing patients' test results, X-ray images, etc. The best neural networks are developed not by large corporations, but by independent labs and research centers. Thousands of new participants are going join the neural network development market.

Skychain will combine their efforts by providing three useful services:

- A single marketplace that will allow millions of healthcare professionals around the world access neural networks, paying the developers a fee for each use of their neural networks;
- A neural network training platform that will allow the developers to train their neural networks for a fee on many datasets prepared by independent data providers, and get very deep and very accurate neural networks;
- A distributed supercomputer that will host and run more complex and more accurate neural networks than any local data centers or servers could ever do.

Skychain will help medical data providers in the following ways:

- It will provide a data marketplace to allow many data providers provide their datasets as a service for neural network training.
- The neural networks trained on the medical data providers' datasets will only be used within the Skychain system to guarantee that the data providers will get their share of the profits generated by training neural networks on their datasets;
- Preparing medical datasets for neural network training will become a profitable business for the owners of such big data.

The Skychain project cares about the intellectual property of neural network developers and data providers. Both the trained neural networks and the datasets used for their training will be protected from any third parties.

Skychain will also protect the patients' private data by sending them in a de-identified form and using end-to-end encryption.

Blockchain and mining

Blockchain technologies are based on crypto mining, which basically means that they combine the computational resources of millions of participants all over the world. Skychain will add social utility to crypto mining and make it more beneficial for all the parties by enabling crypto miners to provide a valuable service, using their computational resources for neural network training and calculation. We have developed the proof-of-deep-learning-training and proof-of-inference algorithms that are at the heart of Skychain.

According to the official statistics, at least 1 in 10 medical diagnoses is wrong. The total annual loss from such errors is more than $100 billion. Skychain will improve the accuracy of medical diagnoses and drastically reduce the amount of money that insurance companies have to pay for their clients' medical treatment. The following parties will benefit from using Skychain:

- Healthcare professionals can minimize their reputational risks and the chance of being sued for malpractice;
- Insurance companies can reduce their expenses and increase profitability;
- Medical patients can get more accurate diagnoses, which will also reduce the cost and length of treatment

Imagine a doctor who has provided medical advice to thousands of patients, read hundreds of scientific papers, and keeps up with the latest achievements in his area of medicine. This healthcare professional is a superstar, and many patients have to wait for months before they can get an appointment.

Combine the experience and skills of all the best healthcare professionals, and you will create Skychain! Its diagnoses and prescriptions will be getting more accurate with each new patient. For Skychain, the sky is the limit! Its services will be very affordable and available all over the world.

Mission of the project

Skychain is based on the concept of pure competition between market participants, with a view to provide high-quality services as cheaply as possible.

- The Skychain software will be open source, so any participant can look into the code. As a result, participants will trust the Skychain system even more.
- Skychain will offer users a wide selection of neural networks developed and run by independent labs.
- Many AI researchers, including college students, will be able to afford training their neural networks using the computational resources provided by other Skychain participants.
- Thanks to the Skychain data marketplace, the best AI specialists will quickly develop neural networks and train them on huge amounts of medical data that no single company, organization, or nation could ever accumulate. As a result, the number of Skychain's neural networks and their quality will be unattainable for any single private or public project.

The mission of the Skychain project is to provide high-quality, affordable medical diagnostic services to a lot of people; speed up the development of neural network technologies and make neural networks available for everybody; and create an open, distributed ecosystem that will not allow any corporate giants or other major players to monopolize the market. We strongly believe that humanity will benefit from our project.

Contacts

https://skychain.global