FAQ

You are talking about diagnosing using medical test results, test images. Can this be even implemented?

Yes. Several dozen neural networks have been implemented and trained by specialists around the world today, already solving these tasks as the best specialists in their fields. This area is developing dynamically – in 10 years most diagnoses will be made by neural networks, probably under the supervision of a living doctor.

Then what is the use of Skychain, if all this is developing fine without it?

The today's problem is that these neural networks function within laboratories and institutions and there is no mechanism for the unified use of neural networks by doctors. Skychain will unify all these distributed neural networks and provide doctors with a single window for their use. Besides this, by uploading information about a patient in Skychain, a doctor can analyze it in dozens (or even hundreds) different neural networks and get the most complete state of a patient.

What has a blockchain to do with it?

It will store all neural networks developed by hundreds of laboratories and organizations in a single registry so that any neural network can be calculated any server connected to Skychain. Besides this, storing neural networks in a single registry is safe for their author as no one except the author can get a reward for the use of his neural network and it can't be unloaded and launched outside Skychain, because the calculation result is decoded the neural network's author's computer with his private key.

What are the advantages of Skychain for developers of neural networks?

Today developers of neural networks must purchase expensive equipment to train their artificial neural network, experiment with various neural network structures and select the best structure for solving their problem. With Skychain, any researcher can build his own artificial neural network using SkyConstrucor builder tools, pay for renting the required computing resources with Skycoins and train his neural network. Then, Skychain will allow an author to get remuneration from end users of his neural network. This will motivate developers of neural networks to upload their neural networks to Skychain and thus develop the Skychain ecosystem.

Will calculations and training of neural networks be distributed?

Yes, when a doctor sends information about a patient and test results, this information is distributed to a plenty of neural networks and executed on different servers at the same time.

neural networks can be also trained in parallel, when one server (for example, of a neural network's developer) controls the training process and plenty of servers of miners consistently train it on individual examples and send the neural network parameters to the controlling server for combining them together. The calculation of neural networks (inference) will be performed on a miner's server and decrypted on a server of the neural network's owner. But an inference is not a costly operation and is effectively performed even on one server.

What are the advantages of Skychain for miners?

Skychain miners can provide their computing resources and get paid not only for mining of cryptocurrency coins, but also providing a requested service, which is in a solvent demand. This fundamentally sets Skychain mining apart from mining of classic cryptocurrencies (BTC, ETC, etc.) where miners perform useless calculations only to "confirm the performed work".

What are the advantages of Skychain for doctors and patients?

Skychain will be able to analyze information about a patient according to his medical tests, history, symptoms and research results. Moreover, this analysis can be performed with hundreds of different neural networks at once that will not miss any important detail and can effectively diagnose rare diseases and improve the quality of diagnostics. A doctor and a patient will be able to get a reliable “second opinion” from Skychain.

Can Skychain be used not for medical neural networks, but for other tasks as well?

Yes, Skychain architecture allows storing and processing any neural networks. We decided to focus on medicine at this stage, as this is a very urgent task and the project organizers have a rich experience in this field.

Some large companies (IBM, Google) design and provide their neural networks for rent, including for medical purposes. Don’t you think that they will monopolize this market and leave room for Skychain?

Yes, developments of these companies are interesting. But training even one artificial neural network for diagnosis of a single disease is a complex task that requires painstaking work on designing a neural network and preparing a large data set for its training. A neural network often must be redesigned and retrained after the training. Thousands of independent laboratories will be able to place their neural networks on Skychain and no corporation in the world can spend so much intellectual and human resources to create their product. Just like no taxi company can compete with the Uber drivers network in the number of cars, no software developer can compete with App Store in the number and coverage of applications.

Some companies, such as Amazon, provide computing resources of their data centers for rent to neural network developers for training and calculations. These centers are very efficient. Will the use of Skychain computing resources for training neural networks be in demand?

Yes, data centers of large corporations are really big. But if you look at the current blockchain networks, such as Ethereum, you can see that these networks combine huge computing resources of miners, much superior in their processing power than any centralized data center. That’s why Skychain will provide more computing powers and at a better price than any corporation.

How do you assess a chance of the project failure?

We admit that at the pre-ICO or ICO stage there may be a situation that the project's tokens will not be redeemed and we will not be able to develop the project without this support. The project failure is possible in this regard. But we are 100% sure that a platform with principles outlined in our whitepaper will be created and universally recognized. Modern technologies allow creating such a system, which means that it will definitely appear, since its high value for people is obvious. If the ICO is successful, we are confident that we will implement Skychain and it will be universally recognized.

Ok, this project is really interesting, but why do you think that it is your team that should implement it?

The Skychain project is at the intersection of five fields:

- Blockchain
- Artificial neural networks
- IT in medicine
- Sharing economy
- Cryptography

We, founders of Skychain, have deep knowledge and experience in all these four fields. And, which is also important, Skychain is a project that we want to devote our lives to.

Why did you choose ICO and not attracting venture investment?

The attraction of classical investors reduces the level of independence of the team and the project. We want to remain independent, develop Skychain not relying on investors' opinions and their short-term goals. Therefore, we chose an ICO model and hope for community confidence in our project, team and goals.

What equipment do I need for Skycoin mining?

Skycoins can be mined with computers with several powerful video cards. The proof-of-work algorithm used in Skycoin uses matrix multiplication operations (BLAS GEMM), which is most efficiently computed on tensor cores (such as Nvidia Tesla V100). The use of tensor cores allows speeding up the training and calculation of Skychain neural networks a dozen times. We chose this solution to ensure that all computers of miners are useful to the Skychain network, not only for creating new blocks, but also training and calculating neural networks.

The field of artificial neural networks is rapidly developing and new architectures, libraries and new approaches to training are emerging. What if Skychain lags behind?

Skychain is an infrastructure. We will be adding support for all widespread libraries and tools in Skychain. So, if a new library for artificial neural networks that solves problems well appears tomorrow, for example, we will test it and include its support in our core. Thus, Skychain will speed up spreading the progress in this area and the use of the latest developments and libraries by a wide range of specialists and consumers.