The Matrix 2.0

Green Paper

The MATRIX 2.0 Green Paper

Rapid innovations in web and telecom technologies have triggered a significant shift of business value toward the emerging digital economy, which is accelerating digital transformations across enterprise and the implementation of Industry 4.0 practices in manufacturing. Today the primary driver of value creation in the digital economy is an ability to fully realize the commercial value of data, and developments in Artificial Intelligence (AI) are the greatest competitive advantage in gaining insight into data.

The industry is just waking up to the critical problem that the lack of robust data management solutions poses for the data economy. Blockchain now presents a powerful solution to increase data connectivity and support a transformative wave of growth in the data economy. Through a fundamental integration of AI and blockchain, Matrix AI Network is becoming a leading provider of end-to-end solutions for enterprise-grade data management with high security, interoperability and performance.

Contents

1. Data: the most valuable social resource

The social and economic development of civilization has followed an evolution in the sophistication of assets. Social value is generally created according to the following three principles:

1) The exchange value of assets

An asset is anything of commercial or transactional value owned by a company, organization or individual. These can be traditional physical resources like gold, or the capacity to provide services, for example a hair salon. In the data economy, especially with the continued development of AI, data has a greater commercial and transactional value than ever.

2) Attribution determines asset value

Whether pertaining to currency, precious metals, data or services; attribution of asset ownership is the basis of value. An unattributed asset does not yet possess value, or prospective value is greatly diminished.

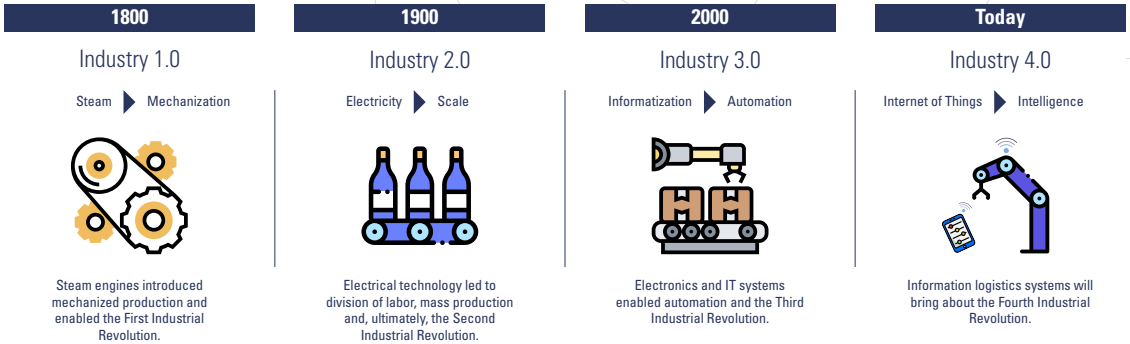
3) Increasing asset value is the basis of economic growth

Throughout history advances in technology and means of production have been linked to increasing asset value. Neolithic societies applied manufacturing processes to stone, such as forging weapon heads, thereby transforming a raw material into an asset. The process of fashioning a tool

categorically transforms the value of the asset. A stone tool having significantly greater value than unwrought stone. Bronze-age civilizations began excavating metals and casting a wide range of new implements; representing a further substantial increase in value. The invention of the internal combustion engine sparked the industrial revolution and created a categorically new form of value. Economic revolutions spur the creation of novel asset value.

Data has become the fundamental asset of the new economy. The training of AI models represents an accumulation of insight and predictive capabilities to generate value by processing natural and social phenomena. AI models are now being applied in nearly every industry and environment. AI applications in Industry 4.0 have substantially increased productivity in human-robot collaborations and even replaced many human workers.

In the data economy, whoever possesses a higher volume and quality of data, will be able to train more effective AI models to perfect their services and create even more data. Data volume and quality has now surpassed earlier forms of asset value, such as traffic on the mobile web, to become the primary competitive advantage in the data economy.



The fourth industrial revolution is the latest economic paradigm for creating asset value. There are unique challenges for monetizing data as opposed to traditional assets. These include low value density and reproduction costs; with highly dispersed ownership and a long chain of stakeholders. For these reasons, current asset management practices have fallen critically short in managing data assets. Some of the key challenges for data asset management include:

1) Sharing barriers among stakeholders

Data sources are an essential asset in today's rapidly digitized business landscape. Yet channels for data sharing are dramatically lacking. In most applications, there are different parties creating and analyzing data. Outside of a minority of areas like online search, defense, and e-commerce; AI practitioners rarely have direct access to data and must rely on collaboration with industry partners to build models. As a result, a common saying in artificial intelligence is that "technology is secondary to data and applications". It's not that technology is unimportant, but rather that the barriers to accessing data are substantial. Among the many barriers that exist, one of the most significant is that no mechanism currently exists to effectively incentivize data providers to share the utility and profitability of data with other stakeholders.

2) Privacy barriers

Big data applications generally require exceedingly large sample sizes to get useful results. To date this model has only been effective to the extent that data subjects forfeit most or all of their data ownership rights. At the same time

massive data privacy breaches have caused substantial harm primarily to the individuals who forfeited their data rights.

Artificial intelligence is a double-edged sword when it comes to data privacy. On the one hand, machine learning (ML) has introduced new privacy preserving measures, on the other hand there is a proliferation of ways ML models are being used to compromise data security—such as stealing model parameters and training data. Finding ways to securely utilize the value of data while preserving data privacy is a central challenge for the sustainable development of the information industries.

3) Trust barriers

Data quality is a decisive factor determining the value of data assets. Poor data quality and erroneous labeling can significantly impair the results of AI algorithms, even causing models to be completely wrong. The ability to assess data quality is based on establishing a comprehensive provenance for data. A fundamental difference between ML and traditional models, is that ML models have poor ability to explain their results. Take for example a traditional risk assessment model commonly used in finance. The model is able to not only quantify risk, but can identify the important risk factors (a low credit score, an excess of outstanding liabilities etc.). Despite the high degree of accuracy, AI models, particularly deep learning models, remain a black box that offers little ability to infer relationships between the data. This leaves a weak link between AI models and decision making.

4) Computing power barriers

Particularly for deep learning, developing a model with strong predictive capabilities requires big data with large data samples (labeled or unlabeled). AI models typically include a training and an inference phase, with training being incredibly computationally intensive.

Developing an AI model currently requires purchasing substantial cloud computing capacity, or building and maintaining your own computing cluster. The cost structure of computing power includes hardware, electricity, and maintenance. A British research organization places the average cost of developing an AI model at £10,000 pounds, with an even greater investment needed to build a deep learning model. Matrix AI Network's own estimates show that over 50% of AI companies are limited by a chronic lack of computing power.

2. Overview of the MATRIX 2.0 ecosystem

The big data industry is the foundation of artificial intelligence and has seen the swiftest development and most salient accomplishments. There are numerous successful big data companies including Google and Amazon. However, their data is rather limited and might be called "one dimensional data." While the volume of data is substantial, it is rather uniform. For example, Google only has data from the users of Google products. Similarly, Amazon only has data from the users of Amazon products. Furthermore, the barrier to copying data is low, with poor data privacy and security protections. Tech giants lack an effective mechanism for sharing information. This leads to multiple "data islands" and fetters the development of AI.

Now consider the fact that each individual has access to an abundance of data. For example, Owen has his Google data and his Amazon data. He has all his communication records, banking records, location data, and the data from dozens of apps he uses daily. This would certainly enough high-quality data to train an AI model. However, the issue is that Owen only has access his own data. The scope of his personal data isn't enough to train even the best small sample ML model. Owen's personal data is however what can be called "multi-dimensional data."

"Multi-dimensional data" is what will support truly transformative growth in AI. The question is how to enable individual users to share their data? How can new

technology bridge the data islands created by big tech? The answer likes in the distributed ledger technology of blockchain.

The Matrix 1.0 platform represents the advent of an AI-optimized blockchain platform. We use AI technology to overcome four fundamental problems in blockchain; low transaction speeds, lack of security, difficulty of use, and wasted resources. We created a public blockchain platform with excellent functionality and reliability.

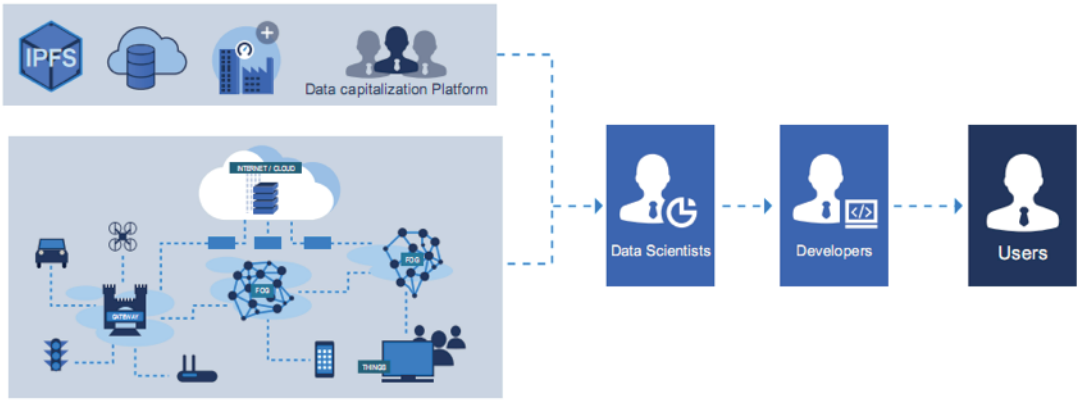
Matrix AI Network is building a blockchain-based AI economy based the three pillars of AI; data, computing power, and AI models. We are creating a self-evolving distributed computing AI platform, complete with aggregated computing power, secure data management, transparent data sharing, and access to an expanding range of on-chain AI data, models and applications.

Individual users and organizations will be rewarded for contributing their data. Recording data directly to our encrypted distributed ledger ensures exclusive attribution of data ownership rights and prevents data from being furtively reproduced.

However simply uploading data to the blockchain has yet to realize the full value of the data. Additional value creation occurs once ML is used on the data to train AI models and intelligent applications.

The Matrix 2.0 ecosystem is a high performance, transparent and fair way to track and attribute data, models and applications which are highly accurate and cost effective. The Matrix 2.0 ecosystem also provides

on-demand computing power, aggregating computing resources over blockchain to combine precious computing power and validation resources. This enables connected nodes to form a worldwide supercomputing network.



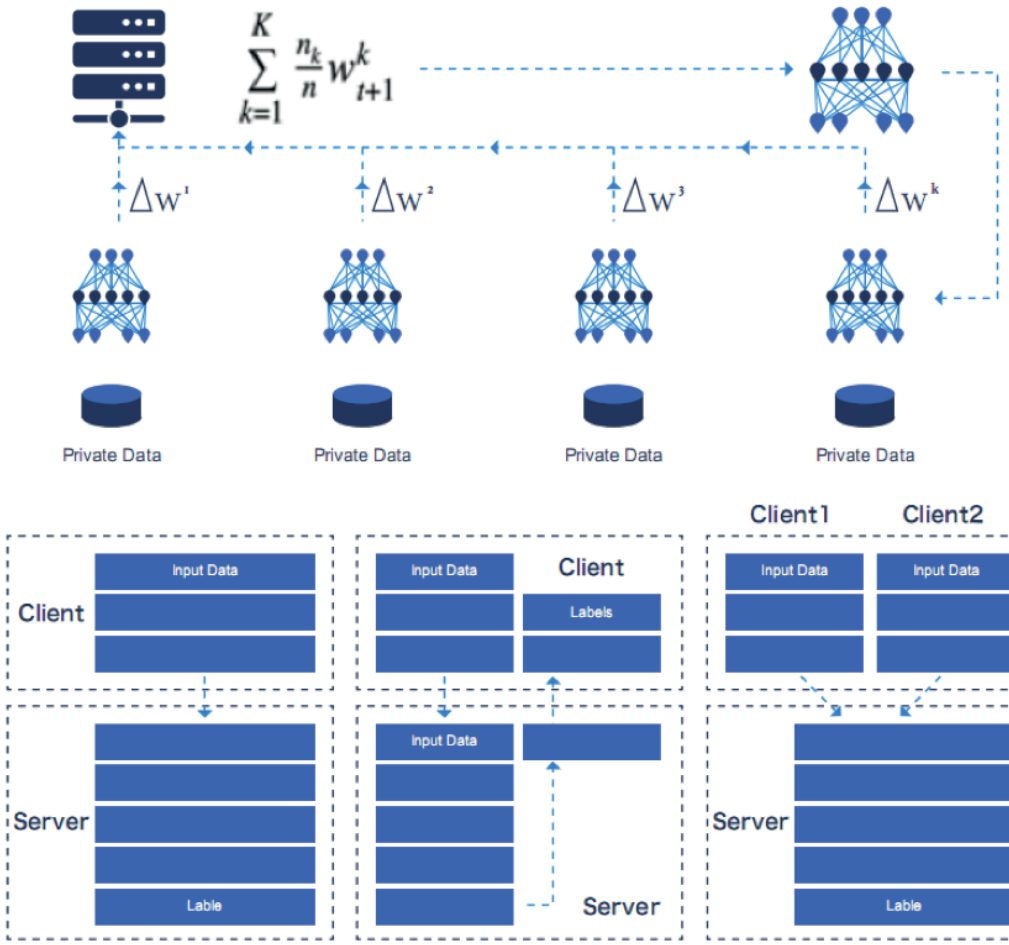
The Matrix 2.0 Ecosystem

2.1. Data privacy protection

How can data privacy be preserved while allowing AI models to process the related information? We are employing the following technological approaches.

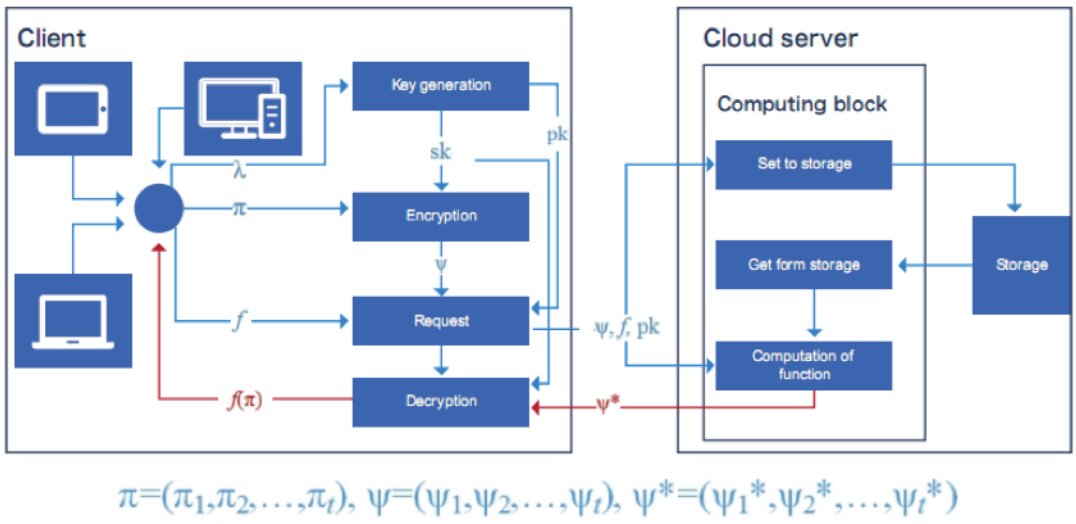
Federated learning

Federated learning is a distributed training method for ML) models, where each device processes a portion of the ML training task, and the training results are later integrated. Using this technology, no individual device has access to complete data and protects the privacy of the data.



Homomorphic encryption

Homomorphic encryption is based on a cryptographic problem from computational complexity theory. Data that has undergone homographic encryption, making it indecipherable to data scientists, is first processed to derive a result. Next, the result undergoes an additional cryptographic transformation whose function matches the unencrypted result without revealing the original underlying data. This process allows data scientists to process data without seeing the original characteristics, thereby preserving data privacy.



Homographic encryption schematic

2.2 Blockchain platform

There are currently a large number of data centers that support cloud computing, yet there remains a persistent shortage of high-availability, low-cost compute for AI. Here are some of the current challenges:

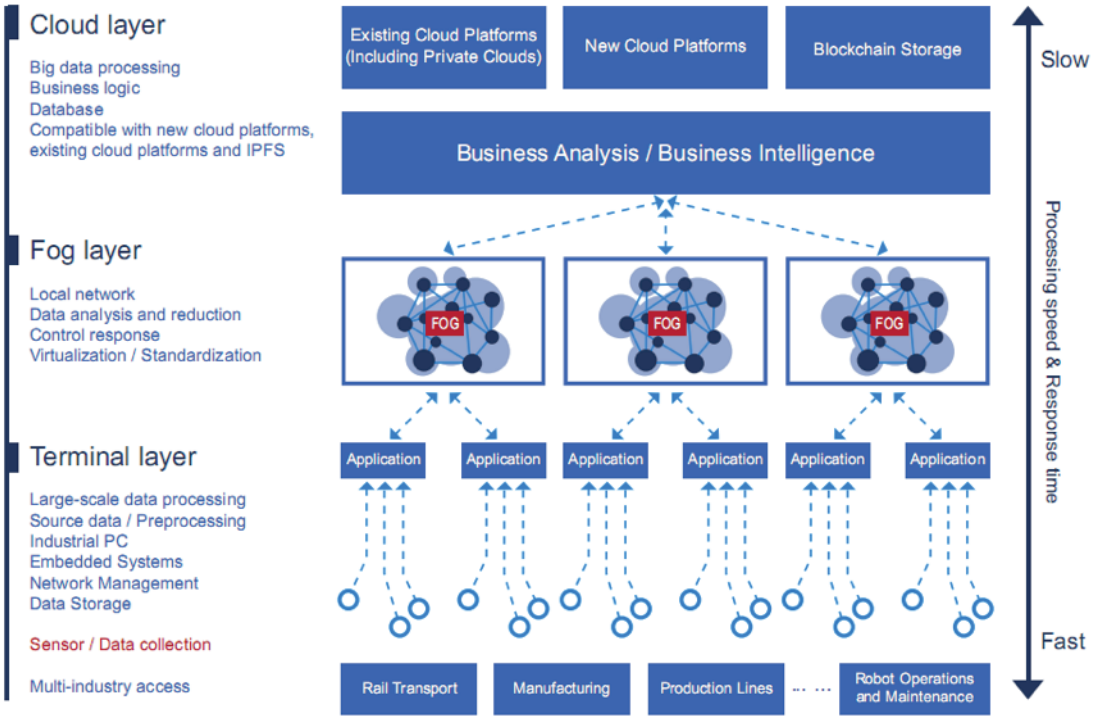
1. Cloud computing platforms are centralized infrastructure, with many cloud providers being data providers themselves. This makes many companies apprehensive about storing sensitive data on the platform of a potential competitor.

2. Cloud computing platforms are already cost prohibitive for many startups, and the costs for data center continue to rise.

3. Cloud computing can't always support the real-time and high parallel processing demands of industrial internet applications.

The Matrix AI cloud platform for industrial big data and scientific research will provide distributed storage and aggregates computing power from cloud, fog and edge devices over blockchain. The hybrid architecture of the platform leverages computing power and storage resources from public clouds, private clouds, overhauled cryptocurrency mining operations, and the blockchain based interplanetary filing system IPFS).

This distributed model creates strong structural protections for data privacy thanks to multiple partitions in data processing and storage. In addition, we plan to use differential privacy for reading and processing data, and federated learning for a distributed approach to training models as privacy protecting measures. Fog computing can support computing tasks that exceed the processing power of individual general or customized end-devices such as embedded image processors with specialized ML accelerator cards). Our computing platform will aggregate and integrate computing resources over the blockchain. The participating devices will contribute excess processing power in return for rewards, which keeps costs low and



avoids the burden of centralized maintenance.

2.3 Data attribution

Algorithms and models infuse life into AI, transforming cold hard data and a vast avmount of computing power to create new value. We plan to use our innovative blockchain management platform to create a marketplace for AI models with the following three goals:

1. Model attribution

As with software and services, the barrier for imitating AI models is very low. The lack of effective intellectual property protections is a nightmare for data scientists. Yet if experts fail to share the results of their research, this is also a barrier to the development of AI. Blockchain offers an ideal solution to this problem by proving attribution for AI models and

protecting the intellectual property of data scientists.

2. Distributed training

Diversity is an important driver in biological evolution. This is also true for AI. The proliferation of data and models in a decentralized blockchain network will provide a thriving ecosystem for creating and training new models.

3. Attribution in our model marketplace

Attribution is an important characteristic of blockchain technology and is a fundamental feature of our model marketplace. Each time a data model is accessed by a user or application, the transaction will be recorded to the blockchain. Blockchain's immutable ledger ensures that data scientists will be fairly compensated each time their model is accessed. There is also a complete status record of a model's usage. This can provide valuable feedback to the creator of the model and allow for future refinements.

On the foundations of protecting the intellectual property rights of data scientists, we will provide a wide range of user-friendly APIs for developers and applications, greatly reducing the barrier to entry for using AI technology and industry services.

3. The Matrix 2.0 architecture

3.1 The Matrix 1.0 platform

The Matrix 1.0 platform employed AI-optimization to create a secure high-performance open source blockchain (For details please refer to our Matrix 1.0 whitepaper).

Matrix AI Network has the following advantages:

1) Faster: We ensured that our mainnet has superior functionality, transaction throughput, and that the network is sufficiently decentralized by using clustering algorithms and our hybrid proof of work (HPoW) consensus mechanism.

2) Easier to use: our intelligent contracts leverage AI technology to allow users to access a range of smart contract templates executable over blockchain, simply by using natural language voice or text inputs in English and Chinese. In the future we hope to support individually customized intelligent contracts using natural language inputs. Our intelligent contracts allow average users to complete transactions over blockchain without coding.

3) More secure: We employ formal verification technology, making contracts and code more secure, offering greater protection to users and their assets.

4) More environmental:Our value-added green mining AI models will replace the wasteful hash model later in

2019. This will transform the proof of work (PoW) consensus mechanism into a product with social value. Going a step further, our hybrid proof of work (HPoW) consensus mechanism allows the vast majority of connected nodes, that aren't selected to participate in a delegate round, to provide excess computing power for useful AI causes. This aggregated computing power can be dedicated to areas like cancer diagnosis, image recognition, or building financial models. This fundamentally transforms the waste inherent to most blockchain projects.

Building on the advances of the Matrix 1.0 platform, the Matrix 2.0 platform will be a further realization of a blockchain with high performance, high security, and ease of use.

3.2 Blockchain storage and computing nodes

Our data chain will be built on privacy protection and private storage. Traditional blockchains were designed for open data storage, giving them an embedded weakness of being half open and half private. The current data economy is predicated on big data and AI processing. This requires data collaborations between multiple independent entities. This is why preserving data security and privacy are an important function for blockchains. They can also help support various forms of data attribution to allow a distinction between the right to access and use data, and data ownership.

The Matrix AI Network blockchain platform is being

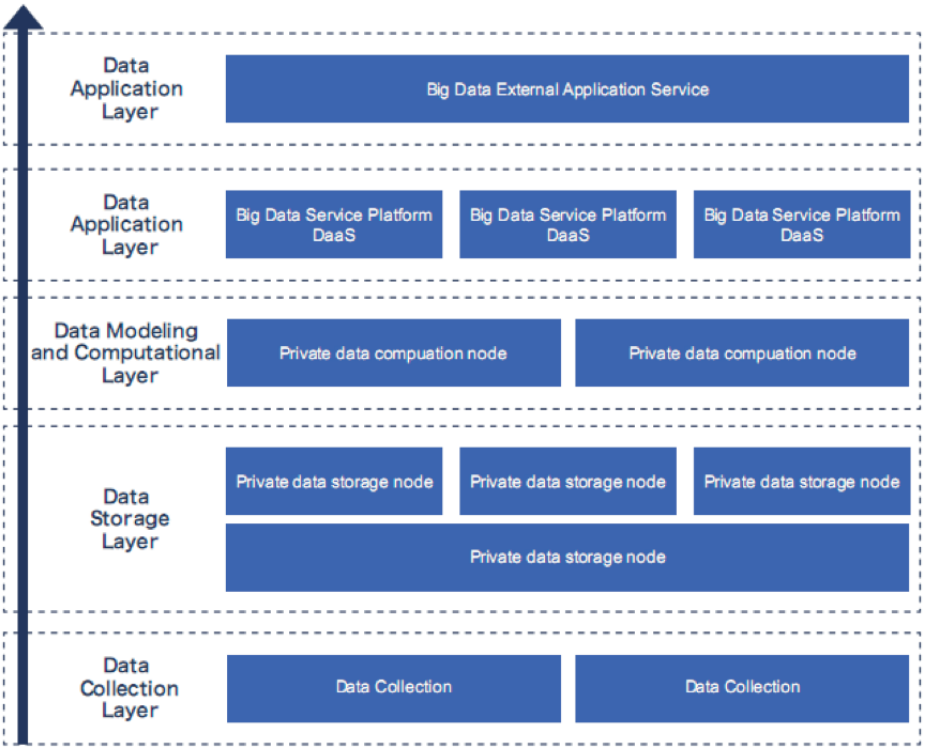
designed with these key data security measures and data features:

1) On the core foundations of protecting user data privacy, we aim to increase data utilization and transactions

2) Enterprise-grade data sharing applications to realize a greater potential for AI in industry

3) bridging data islands to create fertile new opportunities for big data to evolve, including collaboration and profit splits on data generation, modeling, applications.

In order to preserve data security, the Matrix AI Network blockchain will develop a Secure Multi-party Computation (SMC) framework. The SMC framework will allow for collaborative computing among trustless actors, while upholding data privacy. SMC will allow multiple parties to



participate in computation, while masking inputs and preserving the independence and computational accuracy. SMC frameworks are generally used in applications like delegation, elections, auctions, verifiable secret sharing, and threshold signatures.

The SMC framework will be an integral part of our cloud computing, blockchain, and AI infrastructure; utilizing zero knowledge proof and other cryptographic technology to enable a highly interoperable next generation computing platform shown in the diagram below:

In the framework any node in the blockchain network will be able to participate in private computing. The node can initiate collaborative computing tasks, or opt to participate in tasks currently in the network. Routing, addressing and computational procedures will be controlled by hub nodes

who distribute data and computational procedures. Each multi-party compute (MPC) node will receive and process the task on local machines, according to the computational procedures issued. They would then transmit the results via router to the designated node. In this framework computational tasks will be completed by multi-party nodes and return an exclusive result.

Throughout the entire process data will never leave the local site, and no unencrypted data will be revealed. The result will be computed across a distributed network of local devices to safely return an accurate result.

3.3 The blockchain operating system

In the traditional cloud computing model, geographically dispersed cloud devices access a common gateway and distribution platform. This makes for a strongly centralized system. The Matrix AI Network blockchain operating system will not only protect privacy, but aggregates multiple features for a convenient and flexible on-demand service solution.

There will be five main functions in the Matrix AI Network blockchain operating system:

1) Orchestration of tasks and distributing computing power

2) Management of computing power resources

3) Privacy preserving cloud and distributed storage

4) Secure routing network

5) and secure mechanisms for user access and distributed

management.

The Matrix AI Network blockchain operating system will offer a range of services to developers, including oracle services, multi-chain management, middleware solutions, smart contract creation, Dapp development, and a range of plug-ins. The blockchain operating system will also offer users a convenient user interface for intelligent human-machine collaborations, and for exchanging blockchain applications.

The operating system will also offer users a selection of modules and services so that they can customize their own blockchain solutions.

3.4 Blockchain payments

An inherent benefit of traditional digital currency payment technologies is complete and immutable attribution tracking for transaction histories. The digitization of assets and a comprehensive redesign of the underlying financial technology infrastructure, can significantly lower costs and enhance the efficiency of transactions, settlements, and clearing processes. A blockchain-based solution also represents a significant improvement in liquidity for the remitting party. Digital currency payments can lower fees for international transactions and increase the velocity of capital flows, which can stimulate international trade.

The advantages of blockchain payment systems when compared with traditional payments are an increased trust and protections for user data, ledger data, and credit records. New blockchain payment systems can leverage user spending insight while protecting privacy by analyzing

secure aggregated and anonymized user data to derive deeper level data insight. This allows competition with traditional financial institutions and third-party payment platforms on services, while offering superior user data protection.

The Matrix 2.0 platform will use blockchain APIs to share AI models. API providers can then create a blockchain node and users of the AI model APIs can use digital currency to utilize the AI services. The blockchain APIs will manage model access, validation and payment for usage. There will be three components to the use of APIs:

- Issuing an API:

a) Providing AI services through the API marketplace.

b) The API will be associated with a blockchain node, generating an API ticket, and logging transactions to an API registry.

- API access and authorization:

a) Users will gain an access pass for services by purchasing a key for a specific model in the API marketplace, purchased with digital currencies.

b) Generate key information (including access period and pass ID), which is will logged in the decentralized registry and update access records in real time.

- API orchestration:

a) Digital currencies will be used to activate permissions for API services with a key and access pass.

b) Public and private keys will be matched and activated by validator nodes.

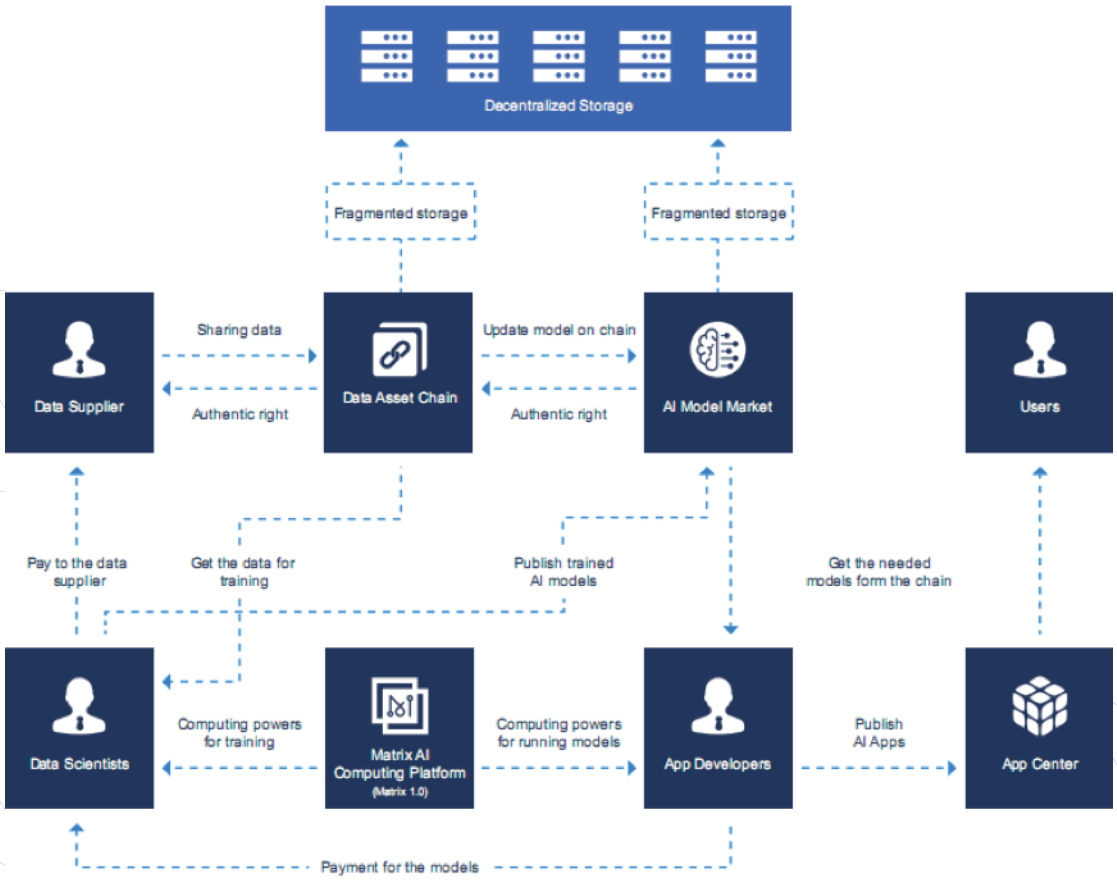
c) Once a key is activated, a pass will be used each time a user accesses the API port.

d) Results from running the model will be returned via the API.

4. The Matrix 2.0 ecosystem

4.1 The Matrix 2.0 economic system

Unlike other public chains, Matrix 2.0 will host a high volume of applications that will boost on-chain circulation. AI technology will be a cornerstone of value creation on the platform; from on-chain computing, to data requirements, and related expenses. In the ecosystem miners will provide the ecosystem with computing capabilities by supplying the network with connected hardware. Bandwidth and storage providers will create distributed storage for the data and model layers. Data providers will enrich the multi-dimensional platform data by uploading data—forming the basis of the software. Data scientists will train attributable models across the distributed network, transforming the data and computing power into models for new AI services. Blockchain technology and distributed storage will help manage computing power, data and AI models. This will turn the Matrix 2.0 platform into a distributed, self-evolving living AI ecosystem.



4.2 Distributed AI computing center

Blockchain can incentivize participants to contribute their excess computing power for mining. This is how Bitcoin became the world's largest computing network. The problem is that the current mining paradigm does not create value beyond the digital currency. If the mining mechanism (including the algorithm and use case) can be modified, the blockchain will have a much greater potential as a distributed compute platform.

4.3 The AI model marketplace

The Matrix distributed computing AI cloud marketplace will not only provide storage and computing power, but help

support the complete AI lifecycle, from data sharing to model development and sharing over a trusted distributed ledger. Complete attribution histories for the generation, storage and exchange of data and AI models will be recorded on the blockchain. Users will be able to browse and evaluate AI models and data sets through the user portal. As needed, they will be able to integrate multiple functions into new AI applications via the API port. The API will also help establish pricing for the data and models, further substantiating their value. Data and models will be digitized and utilized over blockchain, giving them strong attribution protections. This will provide a certified, fair and open data sharing solution for data providers, model developers and big data application developers.

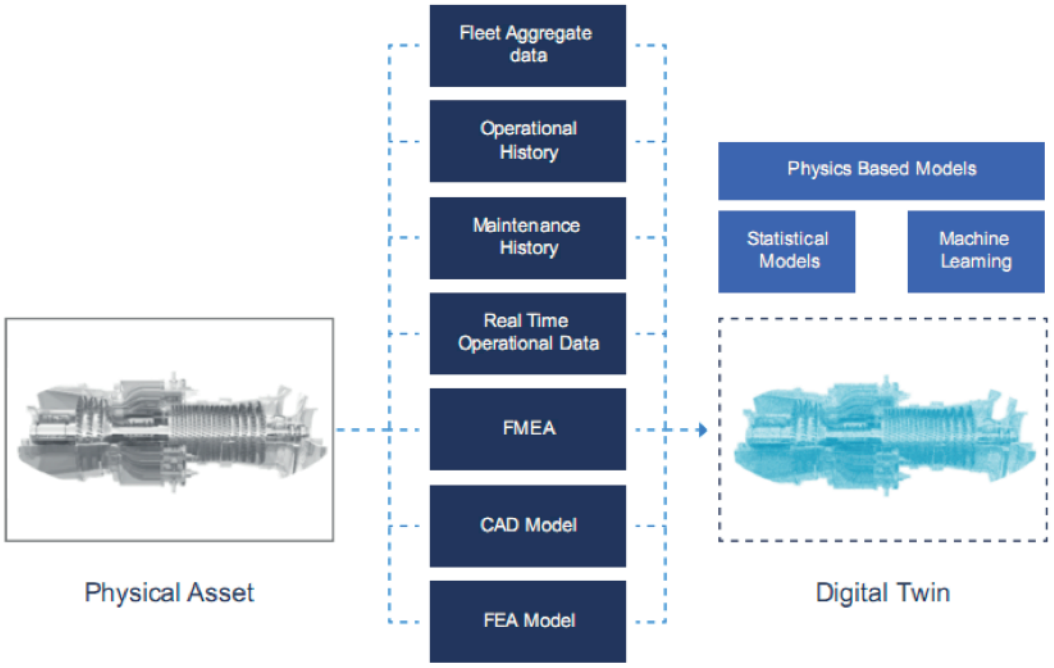
4.4 The Matrix 2.0 platform and Industry 4.0

Intelligent manufacturing, intelligent maintenance, and predictive warning systems are powerful new AI applications in Industry 4.0. It's estimated that by 2025 AI-powered predictive warning systems will save industry $630 billion annually. With the technical expertise and industry experience of the Matrix team, predictive maintenance will be an important area of future development.

Digital twin technology

The fusion of digital and physical systems will continue to an important driver of innovation in the intelligent manufacturing era. Industry has a great need for technology capable of simultaneously tracking and comparing information from design specifications and actual operations of equipment in the field. Digital twin technology

registers actual operational status of physical equipment, while mirroring this status in digital space. Digital twins use multiscale hyper-realistic dynamic probability emulation models to integrate process, status and action data for multiple components. This can be used in modeling, simulation, control systems, diagnostics and prediction. The distributed Matrix 2.0 data platform will be a valuable solution for training of digital twin models.

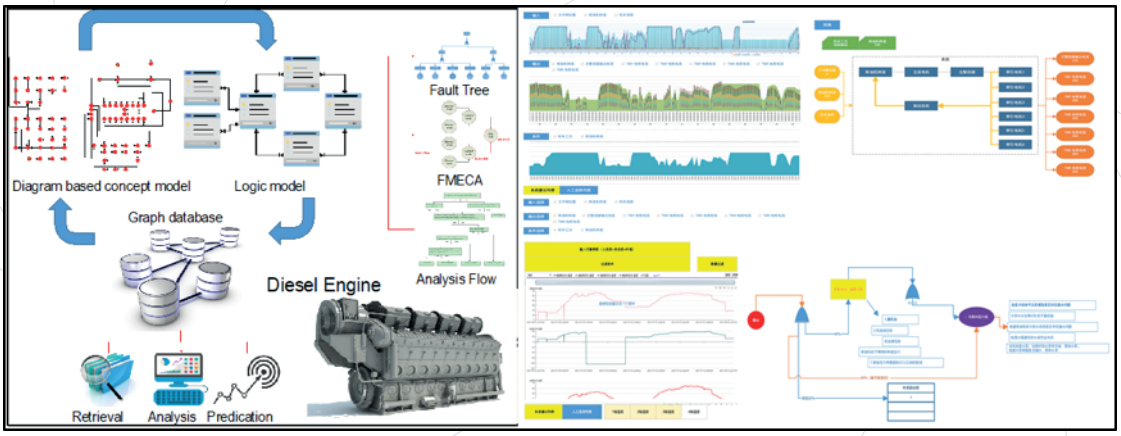


Digital Twin diagram

Fault diagnosis

Digital reconstruction of critical components in industrial equipment can be used to evaluate logical connections between systems (in terms of correlation and causation) then expressed as a graphical model. The graphical model is then used to establish data-driven predication models; for example, in the form of a deep neural network. These

models can be applied to critical components, drawing on the characteristic learning and predictive capabilities of ML methods. Once the mechanisms are synchronized, testing can occur in the real world to sample fault data from operations. This allows performance to be analyzed from different disciplines such as thermodynamics, acoustics, and electromagnetics. Once reliable characteristic parameters are established a fault diagnosis model can be built. This provides the foundation for a complete solution including analyzing fault location, fault isolation, and fault-related consequences to make maintenance recommendations.

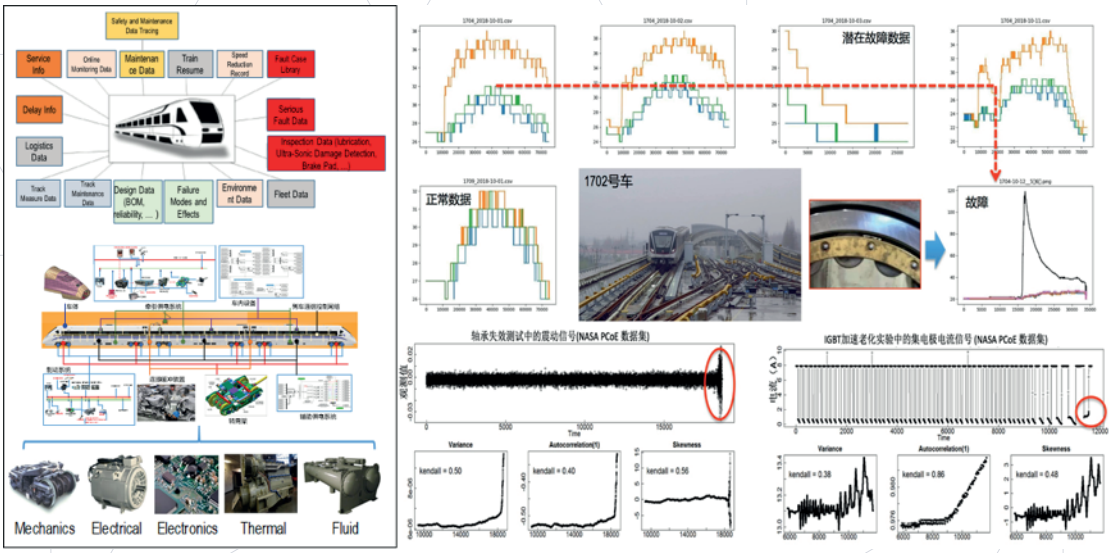


AI fault diagnosis inference system

Fault prediction

We intend to design new fault prediction systems utilizing next generation internet of things infrastructure. These systems will have three tiers. The first layer will consist of data collection using sensor equipment and modeling to anticipate future equipment degradation based on physical modeling of different equipment parts. The second layer will include fault warnings based on training deep learning

models from collected data to identify pending problems in equipment. The third layer will consist of predicting secondary fault-related consequences, starting from concrete data labeling and categorization, then using deep learning to associate specific data with a specific fault.



Fault prediction system currently in use for a municipal rail project

Generating process optimization

Artificial intelligence offers manufacturing a comprehensive optimization solution. The diagram below illustrates some sample AI capabilities that could be applied in an aluminum smelting plant.

- A distributed intelligent recognition system to identify parameters representing differences in status across multiple compartments of a large-scale aluminum smelting furnace.

- Optimized control system for a large-scale aluminum smelting furnace.

Using a combination of data and expert knowledge to

develop status prediction models, more energy efficient control systems can be built for aluminum smelting furnaces.

- Fleet optimized control system for a large-scale aluminum smelting furnace.

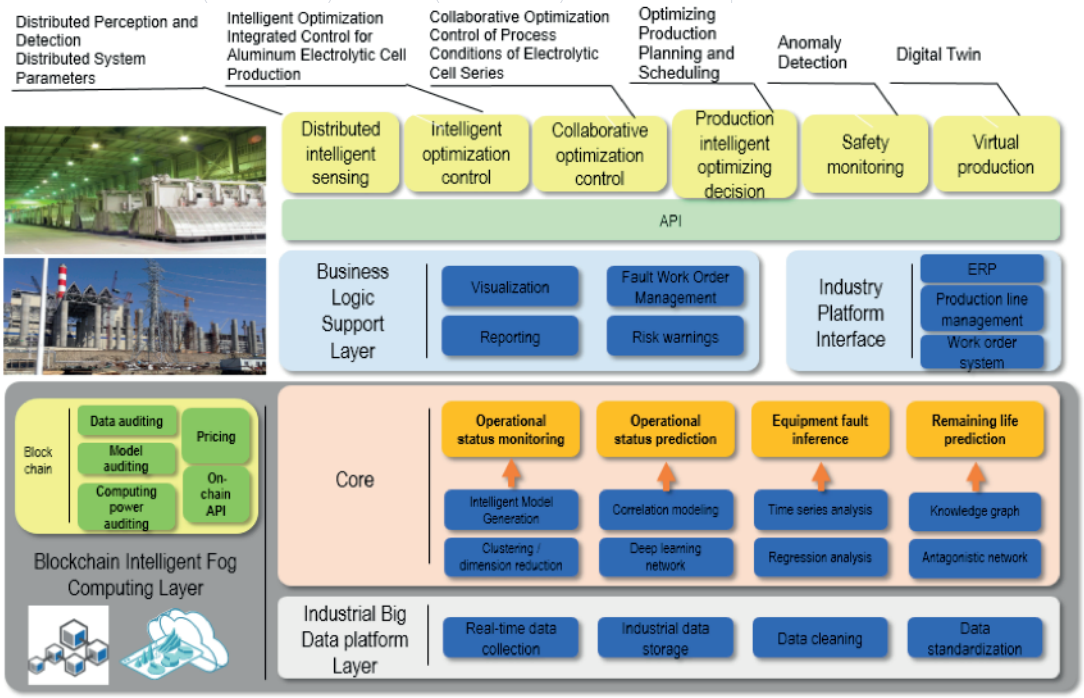
By deriving uniform performance metrics and results across different smelting units in similar operating conditions, fleet optimization of system-wide operating conditions in the control and management of large-scale aluminum smelting furnaces can be realized.

- Intelligent decision optimization system for aluminum smelting production.

By predicting outcome and technical specifications for using different materials and energy supplies in aluminum smelting production systems at scale, production can be adjusted and optimized according to set production targets.

- Simulated production system for aluminum smelting production.

Digital twin technology can be used to optimize controls and workflow in the aluminum smelting production process, including: fleet controls, optimized decisions, diagnosing production anomalies, emulating experiments and visualizing production conditions.



AI-powered aluminum smelting process optimization

4.5 The Matrix 2.0 platform in the era of personalized finance

As a society develops economically, there is a corresponding rise in discretionary income. Since an increase in asset value spurs economic growth, boosting the velocity of asset circulation creates broader economic growth. At the same time better asset circulation supports rising operational efficiency. This is the reason for many innovations in P2P finance. But core challenges like privacy protection for personal credit make it difficult for a centralized model to broadly spur and the era of personal finance. The role of centralized intermediaries creates a trust problem that we seek to overcome with the Matrix 2.0 system, to realize the greater promise of personal finance.

1. Decentralized consumer credit protection platform

We plan to use a distributed storage solution to securely store individual consumer credit data, which can prevent breaches and corruption of this sensitive data. This will also resolve the problem of accessing individual credit scores.

2. Intelligent consumer credit system

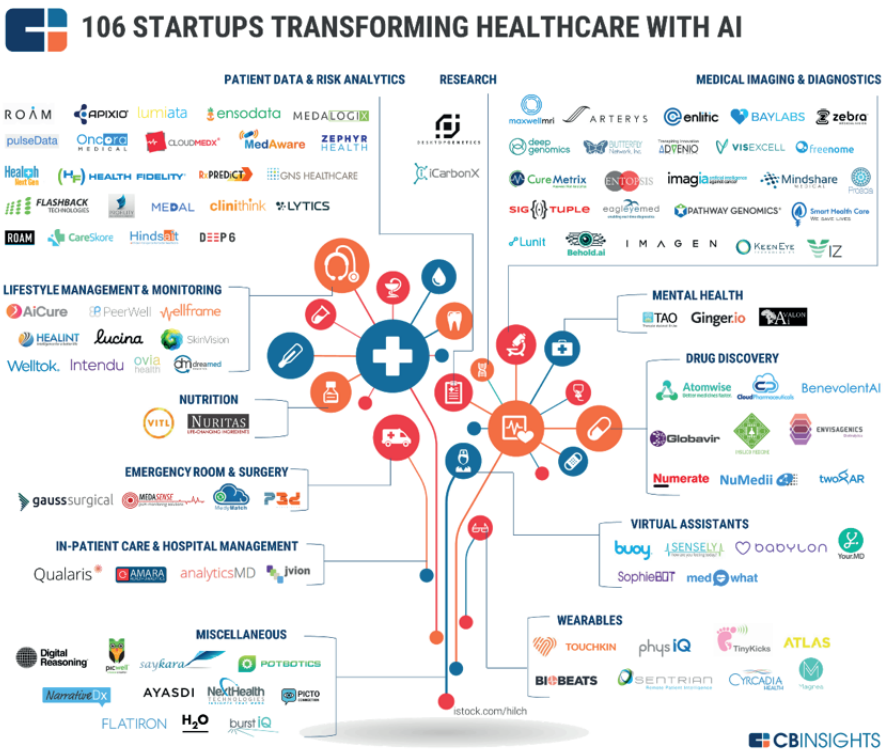
Leading small sample analysis and unsupervised learning techniques are highly effective for determining credit worthiness of individuals and SMEs even with limited data

3. Contractual fund management

This will eliminate the need to place funds in a centralized bank account or custodial account, or make installation payments to a lender. Funds will be mediated by on-chain intelligent contracts and a secure contract management system. The contract conditions and terms of payment will be set according to intelligent contracts, greatly reducing risks and security concerns.

4.6 Intelligent medicine on the Matrix 2.0 platform

Healthcare is projected to become the industry with the third largest total addressable market by 2025. Our experts from Matrix AI Network already have a successful track record of innovation in healthcare. Our AI-assisted cancer diagnosis system is currently implemented in a number of hospitals, and early successes include developing the world's first diagnostic model for small cell cancer and lifespan prediction systems.



CB Insights has classified a number of AI companies in the intelligent medical space, and AI-assisted diagnosis is a particularly active area of development. However, the popularization of intelligent medicine is still being hindered by challenges such as a lack of high-quality data and poor protections for individual health records. The Matrix AI Network solution is different from other AI providers in this space, directly connecting patients with a highly accessible intelligent medical service.

1. An accessible intelligent medical platform

Patients will not need to subsidize the massive costs of medical equipment and AI computation. Patients can upload files in the requested format directly into the user interface of the Matrix AI server, including medical histories or CT scans. They can then receive results from award winning

AI-diagnosis models for a minimal outlay of MAN tokens to compensate computing and validation master nodes. This greatly reduces the barrier of entry to intelligent medicine, which is particularly valuable for servicing remote regions with limited access to world class medical opinions.

2. A truly secure online medicine platform

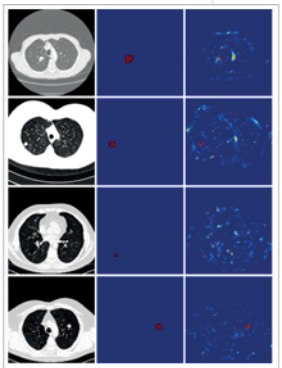
The secure distributed storage solution for health records is a cornerstone of our Matrix 2.0 platform with significant implications for the development of the medical industry. The data privacy of the patient's records enjoys double protection of secure distributed storage and protection of stealing data in the computation phase.

3. A scalable online medical platform

The Matrix diagnosis platform will be continuously enhanced by uploading a high volume of patient data to improve accuracy and diagnosis models.

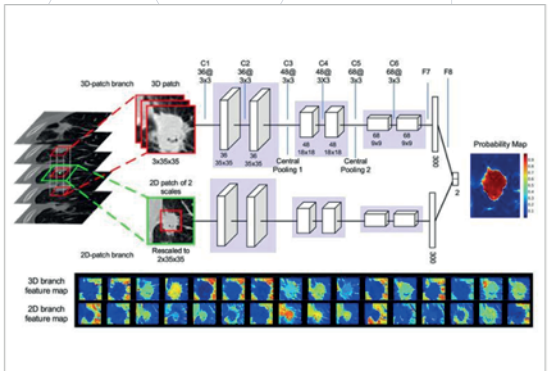
4. A highly extensible intelligent medical platform

The Matrix 2.0 will provide a rich set of tools and models supported by a team of world-class data scientists. This will be a platform for doctors to enhance their own data and train their own models, further enriching the platform.



Detection

Proc SPIE Int Soc Opt Eng. 2017; 10134: 1013409.



Segmentation

Med Image Anal. 2017 Aug; 40: 172–183.

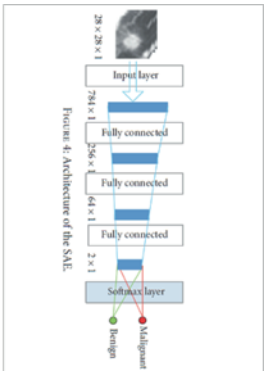
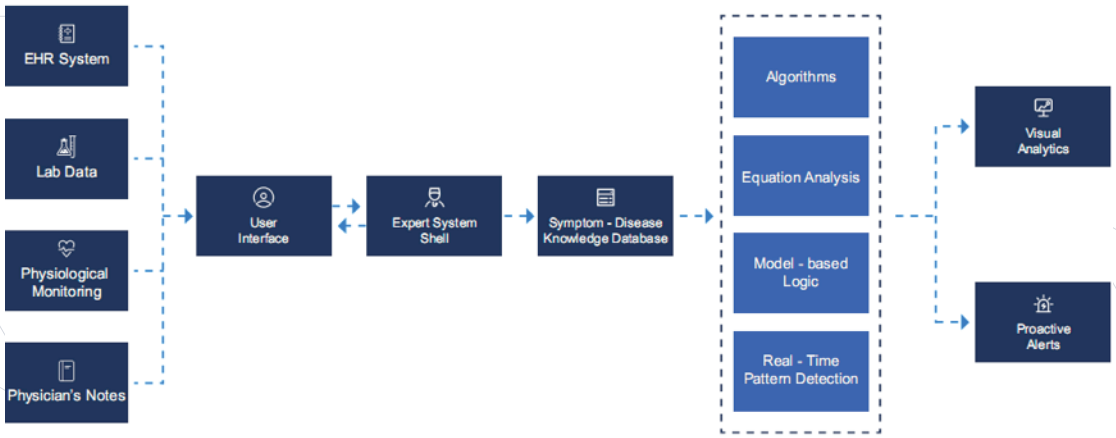


Figure 4: Architecture of the SAE.

Qualitative Diagnosis

Journal of Healthcare Engineering Volume 2017



5. Conclusion

We are witnessing a great era in which big data, artificial intelligence, and blockchain technologies are changing our lives in unprecedented ways. While machine learning applications offer great opportunities to extract value from data and create social good; we also see an ever-increasing demand for protecting the privacy of personal data and related digital assets. Built upon cutting-edge blockchain, distributed computing, and machine learning techniques, the Matrix 2.0 platform will enrich the scope of blockchain and serve as a distributed cloud, a decentralized ledger for digital assets, and a platform to develop AI applications.

The Matrix 2.0

Green Paper