Coining.AI Whitepaper

March 28, 2018

Artificial Intelligence and Blockchain Driven Cryptocurrency Trading Platform

Abstract

Cryptocurrency is one of the fastest growing markets and platforms in the world. With a total market value of nearly half a trillion dollars and around 70 different exchanges, cryptocurrency represents a growing market for investors and companies alike. With over 1500 cryptocurrencies currently available, there are options for a variety of different use cases and needs.

More than anything, cryptocurrency is a diverse and growing market. While much of the mainstream news is dominated by Bitcoin, there are plenty of other coins that offer legitimate features to investors and coin owners. Part of the diversity and growth of crypto is due to its 24/7 market, which is open and trading every day of the year. This 24/7 market means investors must always be informed, and must always be tracking coin price and other crucial data.

At CoiningAI, our goal is to give our users an investment platform that helps them at every step of the trading process. Many new crypto investors become overwhelmed with information and don't know what to do. CoiningAI uses proprietary artificial intelligence including machine learning, natural language processing and neural networks to score and contextualize social media and news sentiment about coins and combines this data with coin price changes, historical indicators, and much more. This technology helps our users build a well-balanced portfolio and tell them the best times to buy and sell. We also help automate coin selection, trading portfolios and provide bot developers a place to create ever more successful trading bots that our community can use.

With the power of artificial intelligence, we are giving our users what they need to succeed in the 24/7, half a trillion dollar cryptocurrency market.

Problems in Crypto Trading

The crypto market currently faces a variety of challenges, ranging from collecting proper coin information to intelligently trading for maximum profits. These problems are applicable to both new traders and experienced traders, and can make it very hard to be a successful cryptocurrency investor.

Information Bias
First and foremost, it can be challenging for investors to understand coin valuation, coin prospects, and other important data on a daily basis to then make informed trading decisions. The information needed to make good decisions is spread across various news and data platforms, making it hard for people to know where to look for crucial cryptocurrency news.

Volatility
Furthermore, many investors struggle with the incredible volatility of the cryptocurrency

market. While volatility can be viewed as a bad thing, it represents a huge profit opportunity for investors who can enter and exit the trade in perfect time, do their research and know how to tell if a coin is legitimate or not.

Research
Because of the 24/7 nature of the cryptocurrency market, many investors simply don't have the time to monitor coin prices themselves. This means they might miss buy and sell opportunities for maximizing profit gains. Many investors also need help creating and managing crypto portfolios for long term investments and medium term and short term gains.

Barrier to entry for bot creators
Despite having the skills of top data scientists, many people can't build the infrastructure necessary to collect coin prices and use advanced NLP to aggregate appropriate social buzz information. Even after building a trading bot to predict the price, people are unable to reach customers easily and ensure that everyone is getting a fair share of profits.

Finally, some cryptocurrency investors have a desire to contribute to social ventures using their crypto gains, but it's hard to find legitimate ventures and even harder to track if your investment actually made any positive impact.

Coining.AI Solution

As an answer to these problems and opportunities, Coining.AI is one of the first companies pioneering the use of blockchain, A.I. and predictive analytics to give everyone better tools to manage their cryptocurrency portfolios, stay up to the moment on the fast paced cryptocurrency market and automate trading to maximize investments.

Benefits to Customers

Saves Research Time
We put all coin and token rankings along with up to the second news and social media buzz at your fingertips, curated by AI.

Automation & Risk Reduction
Bot executes buying and selling based on Artificial Intelligence and technical market indicators to maximize profits and take the guesswork out of cryptocurrency. Great for beginners and experts.

Portfolio Building

Many investors struggle with creating a versatile and risk-averse portfolio. We help users create a well-balanced portfolio that's tailored towards their timeframe, risks, and availability.

Rewards Community
Trading bot marketplace that rewards data scientists and bot builders for building high performing bots.

Philanthropy
We will have several social ventures targeted at helping people successfully trade crypto, as well as making the cryptocurrency industry more accepting and diverse.

XAI Token

The Coining.AI ecosystem is powered by its own utility token called XAI. Every purchase, sale, reward, and fee in the ecosystem will require the use of XAI tokens. The XAI token is intrinsic to Coining.AI as it enables users and investors to access and interact with our platform. Furthermore, it is used for service rewards such a building user submitted bots in CoiningBot Marketplace, and it facilitates a frictionless payment and rewards for our community for their efforts in improving the trading experience.

XAI tokens will be used for all interactions within the Coining.AI Platform, including the following:

❖ Holding XAI tokens in your Ethereum wallet will activate your ability to use the full version of our free services, such as CoiningKit – our coin scanner tools to find the best coins to invest.

❖ All of our premium services will be paid for using XAI tokens, including CoiningSignals, CoiningPortfolio, CoiningBot, and CoiningBot Marketplace.

❖ XAI tokens will also be used for rewards. A percentage of the profit gains from trading that the bot creators receive is rewarded in XAI tokens.

❖ Being at the top of the leaderboard for our trading bot marketplace gives creators exposure to more users, which in return earns them more XAI tokens.

❖ You can earn XAI tokens for creating content in the Coining.AI community, such as building Portfolios in our portfolio marketplace which other members can then buy from you. You can also earn tokens by providing data in our data marketplace for trading bots and more.

❖ XAI tokens will be used to reward members for growing our community, including for inviting people to join the platform, as well as rewarding developers and product experts who help enhance the platform.

❖ Tokens earned can initially be used to pay for premium services and trading fees within the platform, as well as early access to services for new products.

❖ Tokens will enable quick/sample international growth with a scalable, global reward system.

Technology

Blockchain and Smart Contract utilization

Blockchain technologies have been leveraged to guarantee the security and authenticity of the payment and interaction between the user and the CoiningAI platform. Two smart contracts are designed and deployed on the Ethereum mainnet to provide services, including subscription fee payment and trading bot voting schemes on the marketplace.

(1) **Smart Contract - Service Fees & Renewal**
The user will need to renew their trading bot for each period of time (e.g. monthly) to continue investing. To secure the payment gateway, an Ethereum smart contract handles the subscription fee payment transferred from the user via our coin XAI. The smart contract will be notified with the user's transaction history and then confirm the correct amount of the fee payment. A unique and non-forgeable receipt will be generated by the smart contract as a proof of payment, which is safely stored on the Ethereum blockchain and can never be manipulated. The platform checks the receipt from the smart contract and accordingly reactivates the trading bot for the next investment period.

(2) Smart Contract - Bot Rating Marketplace

To ensure competition in the marketplace in terms of trading bot performance, a rating scheme is built to support the comments and rate scoring for the user to indicate the performance as well as their preference of the trading bots. An Ethereum smart contract is implemented to manage the traffic of all the rating actions from the users. The user can rate a trading bot with the receipts for using that specific bot. If the user traded a larger quantity with a trading bot, the smart contract will weigh this rating more important than other users' rating who show a smaller investment on their receipt provided. The user will additionally stake a certain amount of XAI to rate the bots. Technically, the smart contract takes in the rating with the receipt, and stores the rating in a ballot box, which will periodically update the current ranking and the rating of each trading bot on the market. The security level is aligned with the previous smart contract by involving blockchain-protected receipt for both subscription and rating scheme. It prevents any malicious attempt that violate the rating rules in any way, because each vote is unique and traceable, permanently recorded on Ethereum blockchain.

Wallet

There are some convenient ways for users to prepare their digital wallet to interact with the previous two smart contracts for the purpose of paying for subscription fee and rating a particular trading bot on the marketplace. The wallet can be either a metamask wallet, a local hardware wallet or any wallet that can store our coin XAI.

The wallet service itself is a dapp that is embedded in a smart contract, which will connect to a user's metamask wallet to ask for a certain amount of payment according to the investment made on the platform previously. The metamask wallet will notify the user to confirm or reject the transaction that happened on the platform, which, if successful, will transfer the XAI from the metamask account to the platform's smart contract. All of these steps can be performed automatically. A similar workflow is applied to other smart contract relevant services on the platform, in terms of the interaction between the users and the platform.

If a local hardware wallet is used, the user needs to provide the address of the local wallet to the platform for identification. When there is a subscription payment required for the next period of time, the calculated amount of XAI and target smart contract address will be shown on the platform, allowing the users to do manual transactions from their local wallet. When a transaction hash is generated for the payment, the user can provide it to the platform to confirm the success of the payment.

Artificial Intelligence

Advanced Natural Language Processing (NLP) is used to contextualize and score social media feeds, news sentiment about coins and the general cryptocurrency market ecosystem. NLP algorithms are also used to strip out the FUD (Fear, Uncertainty, Doubt), or fake news, to reduce market manipulation in our trading algorithms. NLP additionally helps to track where a coin price is going following important developments.

After extracting NLP based information, to predict the price changes for coins, we use Deep Neural Learning and other Machine Learning algorithms, along with current coin prices, historical coin prices, coin exchange information, statistical technical indicators and historical prices from other markets, including stocks and forex.

Expert traders draw on years of experience to read price charts, decipher market psychology and spend countless hours monitoring social media and news to predict when the price will go up or down and to know when to buy, hold or sell at appropriate times to make significant gains. Our Artificial Intelligence systems learn from historical data for all coins, and also the historical data from other markets to emulate and improve upon the behaviors of expert traders to make the decision making and suggestions of expert traders accessible to any investors. In addition to that, our Artificial Intelligence can monitor hundreds of thousand of data sources and coins 24/7 making it even more powerful than human traders.

Our CoiningBot or other bots from our bot marketplace automates trading based on the Artificial Intelligence based systems.

Security

We are building the state-of-the-art infrastructure and security protocols to ensure maximum security for our users.

We are building our system to keep as little sensitive user information as possible to prevent our users from becoming a target for hackers. Our users own their coins in their hardware wallet or in their personal exchange accounts.
The data we are processing is primarily from publicly available sources such as coin prices, news, social media feeds, exchange information and more. We apply our proprietary algorithms to extract meaning from this data, which is valuable, but is not sensitive user data.

By storing the coins in hardware wallets, the coins are decentralized, meaning they are not centralized and stored in our servers. This makes our users less of a target for hackers because if the coins were centralized, the hackers have one point of access to all accounts. Now they have to hack individual users and at most they can target one particular user with each attempt, which

usually is not worth it. However, this means the responsibility is with the users. They have to be careful to not trust everything they see and should avoid clicking unknown links.

For trading, we work with the exchange accounts and do the trading from user's exchange accounts, instead of storing the coins in our server. This way, the security is primarily taken care of by the bigger exchanges. Though, it is the user's responsibility to find the exchanges that are more reliable. We will support only a few reputed exchanges to make the filtering easy for users. Additionally, to do the trading, we need API access to the user's exchange account, but this will only be used to do the trading. We do not require, and do not want, permission to send money from exchange account. Users pay our fees using our token, XAI, so we do not require the capabilities to send money. This makes sure our platform is not a primary target for hackers, because they cannot send money from user's exchange account either.

Market manipulation by creating fake social buzz is an algorithm security problem or vulnerability for any AI trading bot. We combat the problem in two ways. First, we apply advanced NLP to filter out fake social buzz. If a coin starts increasing suddenly, without much prior progression or a fundamental news from reputed source, it is more likely to be market manipulation. By using NLP and AI, our bot ignores these losing trades. Secondly, these manipulations are usually done on unknown, low ranked coins. One of the requirements on our platform is that users to build a portfolio to use our bot. In portfolio builder, we help users select coins with prospects that we analyze by seeing the coin price, social buzz, news buzz, and other factors over a period of time. This way, users are trading only with a selected group of good coins, instead of risking their portfolio by chasing an artificially inflated coin.

Coining.AI Services

CoiningKit
A set of tools that allow users to see a variety of coin rankings and best buys.

CoiningFeed
Latest crypto news and social posts curated by Artificial Intelligence at your fingertips. Additionally, follow Coins to get AI Curated Research from around the Social Web.

CoiningSignals
Tells you when to buy and sell based on Artificial Intelligence and technical market indicators.

CoiningPortfolio

Automatically builds a coin portfolio to your risk tolerances and preferences.

CoiningBot
Customized AI Driven Bots help you maximize gains for your portfolio.

Coining Bot Marketplace
Trading bot marketplace that rewards our community for building high performing bots, gives our users more options at competitive prices.

Our core modules function as an ecosystem and while each component can be used individually, when used in tandem the whole becomes greater than the sum of its parts.
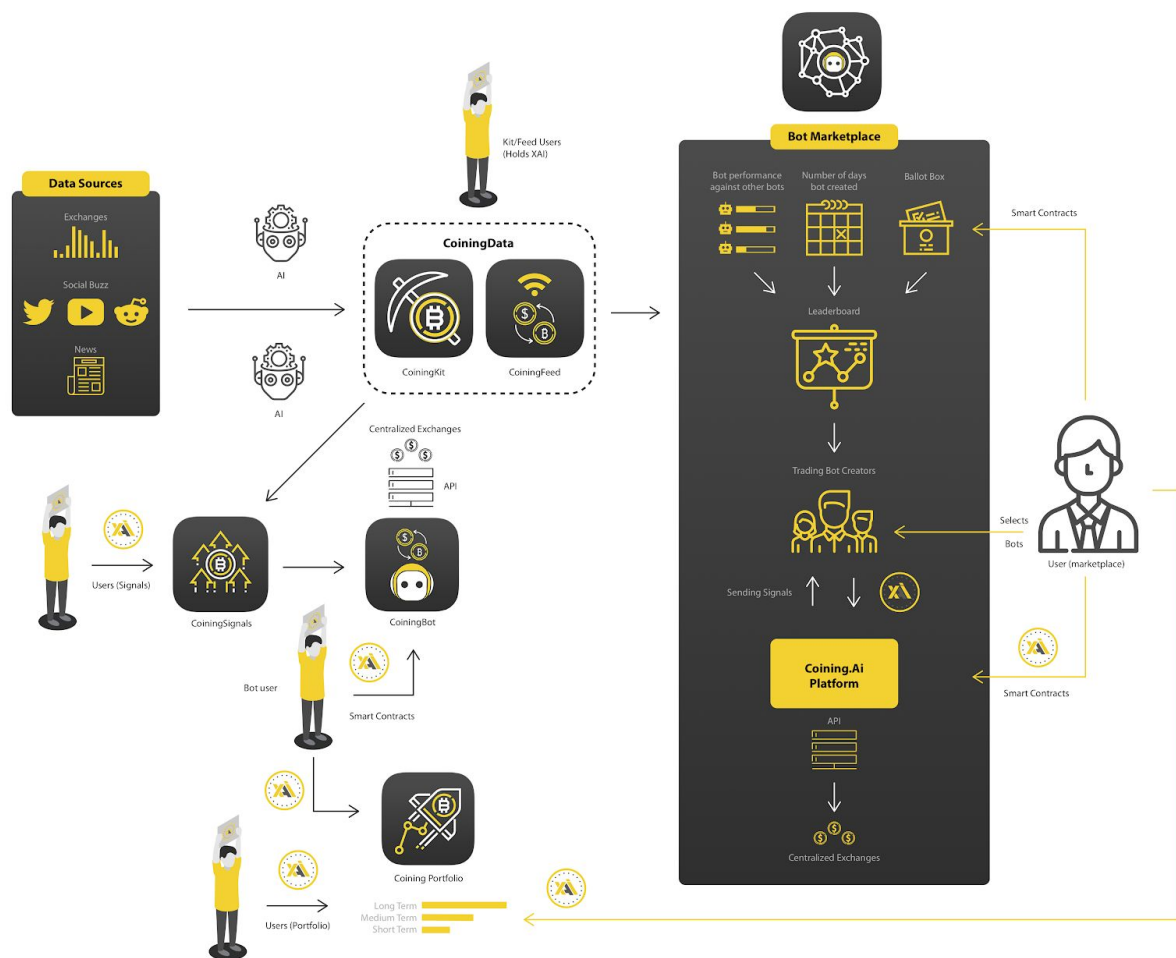
Revenue Model

CoiningAI takes several approaches to handling revenue. Some of our tools, including CoiningSignals and CoiningAPI, offer paid services that better the experience for the user. Others, such as CoiningBot and CoiningBot Marketplace, take a percentage of a user's investment for the services provided:

- **CoiningKit / CoiningFeed**
  - Freemium Service. Users can access basic information on a specific set of coins without paying.
  - For more information on a broader range of coins, a paid service includes a customized coin feed based on coins being followed.
- **CoiningSignals**
  - CoiningSignals is a premium service where the price is based on the number of coins to which a user is subscribed.
- **CoiningBot**
  - To use CoiningBot, users pay 2% of their trading budget as processing fees, as well as a portion of trading bot's profits.
  - This payment is in exchange for the data and tools provided by CoiningAI.
- **CoiningBot Marketplace**
  - Similarly, users pay 2% of their trading budget as processing fees to access the CoiningBot Marketplace. Users also pay a portion of trading bot's profits to CoiningAI, as well.
- **CoiningAPI**
  - API (Application programming interface) to give access to CoiningAI services for programmatic access.

Product Overview

CoiningKit
Use CoiningKit to be one step ahead of the rest of the market.

The crypto market can be incredibly overwhelming to new investors, and even some seasoned investors. With so much information, so much data, and so many coins, it's hard to know what's

legitimate and what's not. At Coining AI, we aim to offer the tools for traders to be one step ahead of the rest of the market.

CoinRank
Ranking based on real time market cap, trading volume and Normalized Price
http://xai.coining.ai/coins.html

The goal of CoiningKit is to give investors the tools needed to better compare coins. While many are fooled by a low coin price or other basic factors, there are quite a few metrics that go into properly ranking a coin. Our CoinRank feature lists coins based on a combination of Market Cap (based on current supply), Normalized Price (based on total supply) and Trading Volume. Thus, you get a list of the top coins based on all of the necessary data points. CoinRank is a better reflection of the ranking at the current instant. From the market cap and normalized price, we capture if a coin's price is increasing and by considering the trading volume into our equation, we capture the early indication of price movement. This helps our users to be one step ahead of the rest of the market.

Social Rank
Combines news, YouTube and Twitter buzz, active Reddit users, and exchange adoption
http://xai.coining.ai/social.html
Social Rank on CoiningAI combines real-time YouTube and Twitter buzz, active Reddit users, the latest news, and exchange adoption to rank coins. We use Artificial Intelligence (AI) to extract necessary information and count the social media buzz appropriately. The Social Rank of a coin will help us better understand how a coin is ranked based on social media buzz.

By analyzing the difference between Social Rank and Coining Rank, we can understand if a coin is overvalued or undervalued. As an investor, monitoring the rank changes, the overall ranks, and specific platform ranks, can give you a better indication of upcoming price changes than others in the market.

Normalized Coin Price
Helps identify overpriced and undervalued coins
http://xai.coining.ai/price.html

Normalized price is calculated considering the same amount of coin supply as Bitcoin. This gives a good understanding of the price you are actually paying for the coin and can indicate if it is overpriced. If the normalized price is unexpectedly high for a coin, it is likely to fall sometime soon as it is priced higher than it should be.

Good Buys
Prospective good short/medium term coins to buy. Makes recommendations based on high

trading volume and low price.
http://xai.coining.ai/goodbuys.html

Prospective good coins to buy are coins with a very good trading volume, lower normalized price, and a rank outside of the top 10 in our ranking.

Prospective Alt-Coins
Investments with low price and the potential to increase in price
http://xai.coining.ai/altcoins.html

Prospective Alt-Coins are coins with very good trading volume (lower threshold than the good buy list), lower normalized price, and a coin price less than $1. These coins usually see significant gains because of the considerably lower face value. However, they usually have significantly high coin supply, so it looks like a lower price, even though it's actually higher. Invest in these coins with caution.

Coin360
One-stop spot for doing fundamental cryptocurrency research.
In these detailed pages on coins, we aggregate the latest news from reputable sources, the top YouTube videos of the last day, week, month, and all time, coin posts on Reddit, and updates from official Twitter pages.

CoiningFeed
CoiningFeed brings you latest crypto news and social posts curated by Artificial Intelligence.

The cryptocurrency market moves at a fast pace, twenty four hours a day, seven days a week. The key for investors is to stay informed, but with such a wealth of information available at all time, it's hard to know where to look to find the necessary information. CoiningFeed serves as a one-stop location for all of the top crypto news, tweets, Reddit pages, videos, and more.

The main challenge for users is finding appropriate news or social feeds for a coin. By just doing a keyword match, users won't be able to find information for a specific coin, such as Verge (on the verge of collapse), ETC (etc - etcetera), SUB (sub-reddit), Storm, Ink, and all. We apply advanced Artificial Intelligence to filter out unnecessary matches and provide users with the appropriate coin information.

News
The news page on CoiningFeed is home to all of the latest and the most important crytpo information. These links and headlines are pulled from some of the most reliable and respected news sources on the web, so you know you're getting accurate and up-to-date crypto

information. With all of these links and headlines in one place, it's easy to quickly get a recap of the latest crypto news and learn what exactly caused that latest price dip or price hike. If you want to survive the crypto roller coaster, it's important to stay current on the news, and that's what we're here to offer.

YouTube

YouTubers have a heavy influence on the cryptocurrency market. What they say can have a dramatic effect on the price of a coin, so it's necessary for investors to be on the lookout for content that could drive the price of a coin, whether it's up or down. Additionally, videos can offer interactive graphs and charts to see price trends over time.

The YouTube tab on CoiningFeed houses the latest and most popular YouTube videos. There are sections for the top videos of all-time, as well as the top videos in the last hour, day, week, and month. These videos can help you stay up to date on what YouTubers think of specific coins, giving you a better indication of potential price changes.

Reddit

Reddit is one of the top sources for crypto news on the web, and CoiningFeed's dedicated Reddit tab is home to all of the best discussions from popular cryptocurrency subreddits. We bring in the latest posts from these subreddits, helping you stay current and survive the lightning-paced crypto market. Reddit can also be a great place to meet and interact with fellow cryptocurrency fans. These connections can be instrumental in staying up to date and making the right crypto investments

Twitter

Lastly, the dedicated Twitter page on CoiningFeed aggregates the latest tweets from crypto developers, investors and other crypto fans. These tweets include tips for making the right buys, insight as to why a certain coin is rising or falling, and more. This feed gives you the social media pulse on cryptocurrency.

Finding the right accounts on Twitter with reliable crypto news can be challenging, and that's why we've decided to aggregate them all in a single, easily accessible feed.

With these tools, CoiningAI is empowering investors by giving them a central place to look for the most important cryptocurrency news. By having this information at the tip of your fingers at all times, it becomes even easier to use our other tools to build portfolios, buy and sell at the best times possible, and much more.

CoiningSignals

The most intelligent buying & selling indication tool for cryptocurrency investing.

With mounting acceptance of cryptocurrency, and blockchain usage growing, the price of legitimate coins will continue to increase in the long term, primarily because we are just now at the ground floor. Having a limited supply of many coins also will increase demand in the future, and as a result, coins that survive have the potential for significant price increases.

On the other hand, there will be always Fear, Uncertainty, and Doubt (FUD) in the market and the price will go up and down in the short term. The concerns about crypto aren't limited to the short term, though, and extend to long term investing as well.

To be one step ahead, you need to have an AI driven system that not just monitors all of the appropriate social media 24/7, but also uses advanced AI to extract appropriate information first to calculate the social buzz appropriately.

CoiningSignals is the solution and it monitors everything for you, 24 hours per day, 7 days a week. Furthermore, it uses advanced AI and Deep Learning models to predict if the price is going to go up or down at a given time.

To make these predictions, CoiningSignals uses a coin's current price, trading indicator values, and the historical prices of all coins and other trading markets. It also considers the current social media buzz, the change in social media buzz, sentiment in social media, and change in sentiment across social media to be one step ahead.

CoiningSignals doesn't just predict when a coin price might go up or down, though. It also predicts the expected gains. For instance, if you are monitoring more than one coin, then you can trade with the coin that has the maximum potential for profits. You can also ignore some signals if the predicted gains is below your expectations.

CoiningSignals is the perfect tool to help you find the best times to buy and sell a coin. Despite some of the FUD in the market, there are opportunities all of the time to be a profitable crypto investor. CoiningSignals, combined with the suite of CoiningAI tools and CoiningAI Portfolio Builder, makes it easier than ever to invest in cryptocurrency.

CoiningPortfolio

The most versatile way to create a well-balanced cryptocurrency portfolio, and share it on the Portfolio Marketplace

Most new cryptocurrency investors don't understand how to build or maintain a well-balanced portfolio even armed with the knowledge of which coins they might want to buy which is something that is very important in the volatile crypto market.

With so much uncertainty in the crypto space, one small thing can tank a coin's future. For example, if a coin is completely dependent upon one person or founder, that person stopping work can permanently crash that coin's price, costing you your investment .

CoiningPortfolio helps you maintain a well-balanced portfolio based on how much time you can spend and your risk level. CoiningPortfolio helps an investor build a cryptocurrency portfolio based around their needs and desires by walking them through the process of choosing their risk level, how much time they can dedicate to crypto investing, and more. One of the keys for a diversified portfolio is investing in short, medium, and long term coins.

Based on a user's time and availability for crypto trading, as well as the amount of risk a user is willing to take, our CoiningPortfolio system will guide the user through the process of building a portfolio for long-term, medium term and short term investments.

After building the portfolio, users can subscribe to the coins they want to follow from CoiningSignals, which tracks coin historical price, trading indicator values, and social buzz, and uses an AI / Deep Learning system to notify users when it's the best time to buy and sell. However, users can also utilize the CoiningPortfolio without subscribing to our Signals product.

CoiningBot

The complete trading bot with advanced AI technologies and a portfolio builder

Whether you're new to investing or a seasoned trader, CoiningBot can help grow your investments. Unlike other trading bots, CoiningBot focuses on building a diverse profile of investments based on your preferences for risk, timeframe, and budget. With these user preferences in mind, it takes a novel and unique approach to cryptocurrency trading automation using Artificial Intelligence. To make the predictions to buy, sell or hold, CoiningBot uses a

coin's current price, trading indicator values, and the historical prices of all coins and other trading markets. It also utilizes advanced Natural Language Processing on social media feeds and news to be one step ahead of the rest of the market.

Existing trading bots are typically complex to use and difficult to understand. These bots are primarily based on technical indicators and almost all of them are designed for traditional experienced traders who use nuanced technical indicators with rule building processes that are onerous.

CoiningBot targets users at all skill levels. Many of the users do not have the trading background or do not have the time to learn or monitor the market. There's no need to choose a "trading strategy", as that will be selected for them with CoiningBot. User's can tell CoiningBot what kind of risk taker they are and we help build their portfolio and spread their risks across long term, medium term, and short term investing where users can actually benefit from high volatility in price and enjoy steady growth. In a bear market, when all the prices are falling, CoiningBot take a nap with its eyes open, ensuring that your investment is stored safely.

For each coin, there is a minimum amount you can trade. When you execute a trade, after the exchange takes a portion as trading fees, a fraction of the coin is not tradable immediately. This is because it is smaller than the minimum tradable unit. Just picking up a random coin and accumulating coin fractions in a random coin can be worthless, but with our tools, we know which coins are good and have potential. CoiningBot only trades coins with high potential and those accumulations over time will be worthwhile to earn you the most return on your investment possible.

Ultimately, CoiningBot removes the human bias and emotions from trading decisions and not only maximizes gains, but builds a portfolio for long term growth.
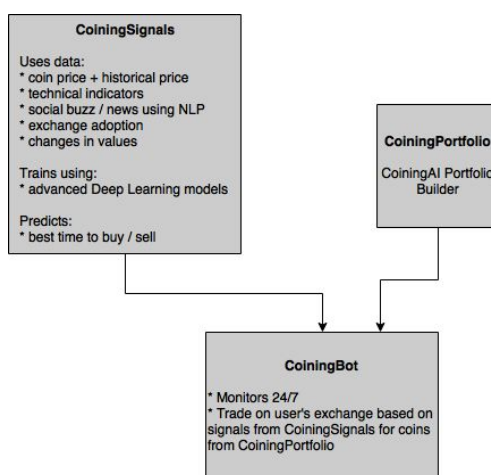
Fig. 1 CoiningBot interactions with CoiningPortoflio and CoiningSignals

Once CoiningBot has all of the information it needs, it can help a user maximize profits by buying and selling coins from their portfolio at the right times. When given a budget, CoiningBot automatically performs algorithmic trading on a user's exchange account, such as their Binance account.

Privacy is important to us and in an effort to protect user information, the user only gives API access for trading. We do not need access to send money.

Periodically, the user needs to pay the financial fees (2% of their trading budget at first) and a portion of gains after the period. CoiningBot features a smart contract to renew trading access. The fee needs to be sent in our coin with smart contract in the blockchain, which will activate the bot for the next month.

This means the first month (or the last month) is always free for the user and the bot will get re-activated as soon as the user pays a portion of the last month's trading gains.

Additionally, investments using the bot are capped at each level. Initially, the user will only be able to invest $100 (Level 1). Then, after paying the smart contract fees, the next level will be activated with an increased budget. With a gradually increasing budget, users will have more knowledge about where their money is going.

How does CoiningBot Work?

Smart Contract: Subscription fee payment using the CoiningAI Smart Contract (CoiningContract)

To make it as easy as possible to reactivate CoiningBot, a smart contract is deployed on the Ethereum blockchain for dedicating work of subscription payment. The smart contract is secure and lightweight, which guarantees every payment is recorded permanently on the Ethereum blockchain without possibility of fraudulence or manipulation.

A CoiningContract will have the following behaviours:

(1) **Payment Entrance:** An endpoint that handle traffic about payment inflow.
 (a) Upfront Payment
  (i) A user browses the CoiningAI Platform and clicks the upfront payment button as the first step to do an investment.
  (ii) The Platform interact with CoiningContract (as the method below)
   1) The user states the quantity of the investment. The Platform calculates the corresponding fee (2% of the investment) as the fee.
   2) The Platform send the message to CoiningContract:
    payUpfront(fee, {from: user_address})

3) CoiningContract generates a receipt as payment proof to return.

4) The Platform confirms the receipt and at most allow the corresponding amount of money to be invested.

(b) Reactivation

(i) A user browses the Coining Platform and clicks the auto-payment button.

(ii) The Platform uses Metamask plugin (or any HDWallet Provider) to interact with the Coining FeesContract on the Ethereum blockchain Mainnet.

1) The Platform calculates the commission (e.g. 20% of the profit gains) as the fee.

2) The Platform send the message to CoiningContract: **payReactivation(fee, {from: user_address})**

3) The CoiningContract generates a receipt as payment proof to return.

4) The Platform checks the receipt and reactivate CoiningBot.

(2) **Auditing**: An endpoint opened to internal status checking

(a) Receipt

(b) Trading Details

(c) Performance

(d) Other information

The following diagram demonstrates the flow between multiple components:
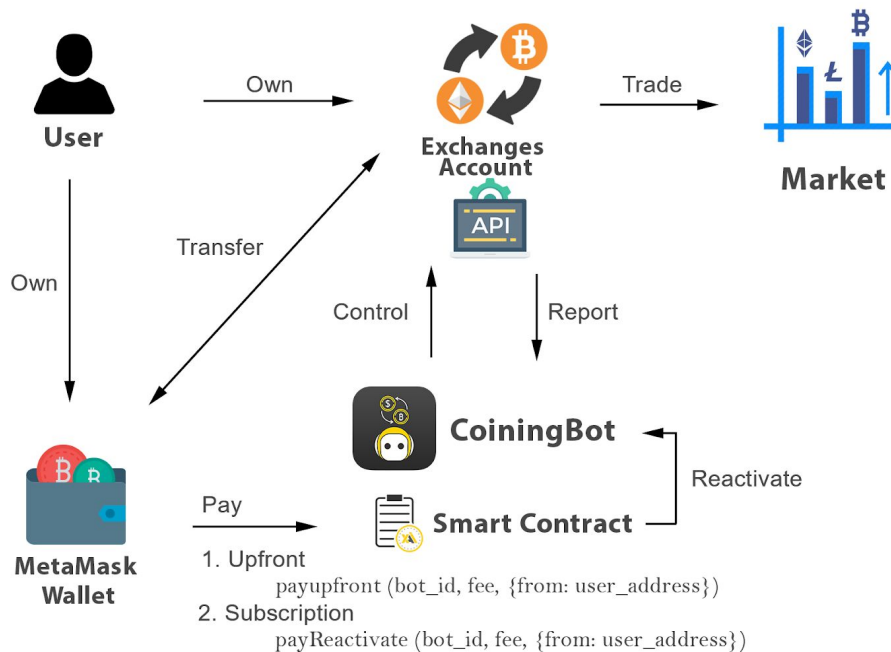
Fig. 2 Interactions between CoiningBot, User and Market.

CoiningBot Marketplace

Most advanced blockchain based trading bot marketplace, combining the best of CoiningAI's state-of-the-art platform and the best data scientists around the world.

The CoiningBot Marketplace will be home to trading bots from creators everywhere. Our own CoiningBot will be just one seller on the Marketplace, with other data scientists and creators offering their own trading bots with long, medium, and short term portfolios. The owner of each trading bot will be able to decide what percentage of profit gains they want to make from their clients.

Machine learning models that are trained on data from blockchain-based marketplaces represent an opportunity to create some of the most powerful artificial intelligence algorithms in the world. These artificial intelligences technologies ultimately result in open marketplaces where anyone can sell their insights, and data scientists get access to the best datasets to build the most intelligent models. Meanwhile, consumers get access to significantly more options at a competitive price in the marketplace.

Building a platform that provides all the coin price data, along with social data, is a huge undertaking and requires a significant amount of engineering work, which limits a lot of very gifted data scientists to taking part in it. CoiningAI Trading Bot Marketplace solves that problem.

Data scientists can create their own bots using the tools and wealth of data provided by the CoiningAI suite of products, which includes coin historical price, technical indicators, social buzz, news buzz, changes in social buzz, price, trading volume, ranking information, and more. Currently, in our data marketplace, CoiningAI is the only provider for the data used for training and real-time prediction. In the future, we plan to extend it to other third party providers, which will give the trading bot creators access to even more data that is indicative of predicting coin price.

Users will come to the CoiningBot Marketplace with a portfolio built from CoiningPortfolio or from the Portfolio Marketplace and will choose Trading Bots based on their wants and needs, such as time in the market, risk tolerance, and more.
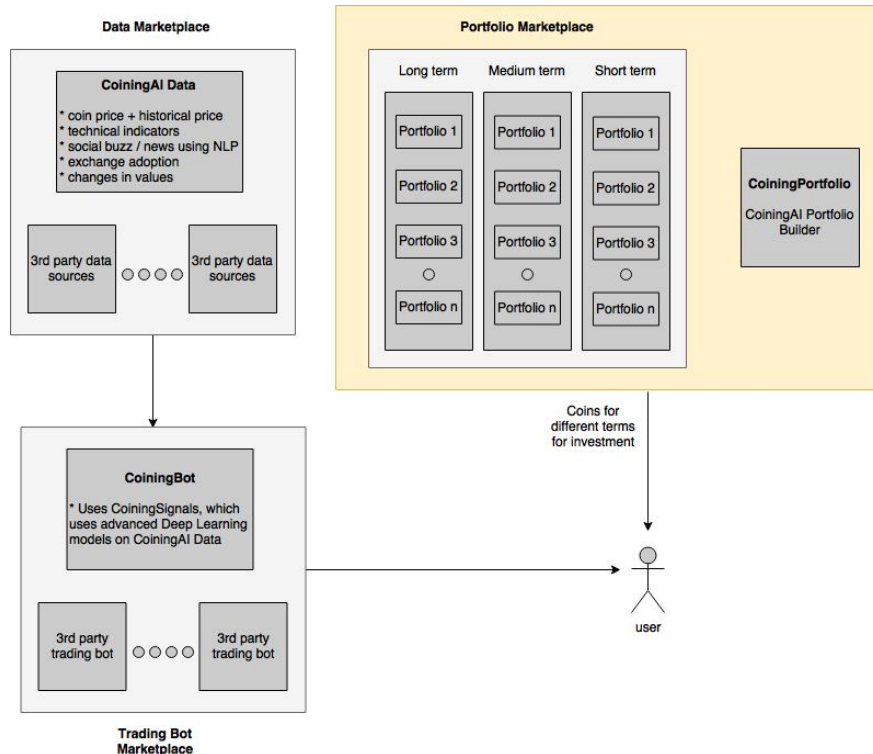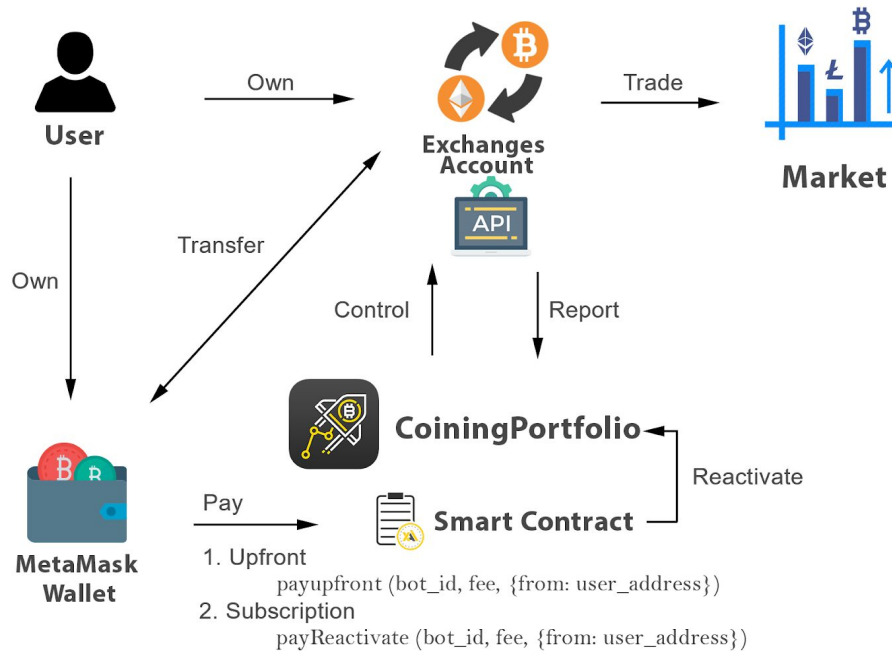
Fig. 3 Workflow of CoiningBot Marketplace and CoiningBot with Data Marketplace

The bots will then send the trading signals to the CoiningAI platform, where the trades will be executed. CoiningAI will charge a 2% processing fee using a smart contract, much like our CoiningBot. Additionally a small portion of the profits from the bots will be paid to CoiningAI for providing all of the data and executing the trades. The bigger portion will go to the trading bot creators, allowing the best trading bots to flourish in the marketplace.

These renewal fees will be paid using smart contract using XAI with a percentage of the profit going to the bot creator. This smart contract, CoiningContract, is deployed on the Ethereum blockchain. The smart contract is secure and light-weight which guarantees every payment is recorded permanently on the Ethereum blockchain without possibility of fraudulence or manipulation.

Fig. 4 Payment Workflow of CoiningMarketplace

Smart Contract Marketplace Bot Rating

CoiningBot Marketplace features a blockchain based rating system. This rating, along with other factors, will help users find the best trading bots for long term, medium term, and short term portfolios. Our use of smart contracting ensures that the weight of each voter is not indifferent and non-forgeable. Only a user who used a trading bot can vote, and the user who traded with larger volume with the tradebot will have larger votes than others. Additionally the user stakes a certain amount of XAI for each vote that goes to the CoiningAI platform and the bot owner.

The votes come from the receipts generated by the CoiningContract when an investment or paid subscription fee is confirmed. The receipt contains information about the amount of the investment, the net profit, the trading bot used, and the digital signature of the user. The user can rate a trading bot with the receipt, which enables several features:

   (1) The receipt proves that the rating is not forged and that it comes from real user experience.
   (2) The weight of the votes can scale along with the amount of the investment. The larger the investment from the user on this trading bot, the heavier the vote is.
   (3) The receipt can separate users into two categories: Ones who have used the trading bot and are providing feedback, and the rest who have not used the bot but wish to comment.
   (4) The receipt can also be integrated and published to show the actual performance of the trading bot. Due to that the receipt is based on blockchain, it cannot be falsified.
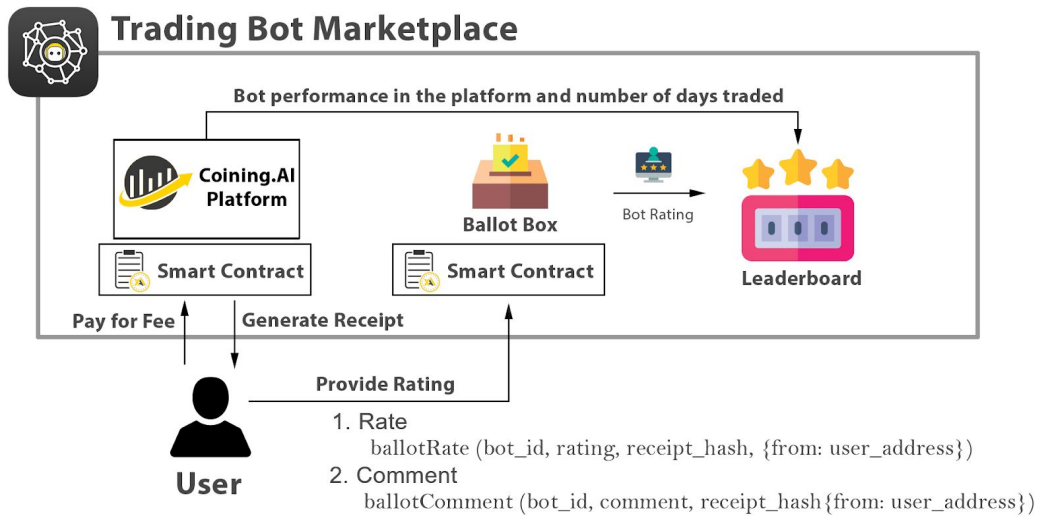
Fig. 5 Trading Bot Marketplace on Coining.AI Platform

Smart Contract Bot Rating Scheme

The rating interface is implemented by a smart contract on the Ethereum blockchain. The user can rate a trading bot given the corresponding receipt(s). The receipt will be attached to the trading bot along with the ratings, which will stay permanent and unchanged on the blockchain, ensuring that votes cannot be forged. Authentication is automatically done by verifying the identity of the user.

Smart Contract of Bot Profits

All the user payments for the trading bot profits are paid using our coin XAI with a smart contract payment, CoiningContract, which generates a receipt as a proof of payment for all transactions in the blockchain with the bot information and profit information. We capture the amount of profits each trading bot earned and the number of days the bot traded from the non-forgeable blockchain to rank the bots on the leaderboard.

CoiningBot Marketplace Leaderboard

To rank the bots that participate in our marketplace, there are three ranking factors for long term, medium term, and short term portfolios. One, user rating using smart contract, weighted based on investment amount. Two, profit earned from that bot compared to other bots on the marketplace. And three, the number of days that bot made real-time predictions.

First, the smart contract user rating aims to capture user reaction to a bot that other, more quantified methods may have missed. Furthermore, the user rating is weighted based on how much money a user has invested in the bot. Thus, users with more investment have a stronger influence over the rating than someone with little investment.

Second, the profit gains from the bot are not based on the average profits from that bot, but rather in comparison to other bots on the market. This accounts for when the market is bear or bull by comparing the gains between bots, not as the pure average profit.

Finally, the Smart Contract Trading Bot system captures how well the bot performed over a period of time. A bot could perform very well for a few days, but that might not be sustainable in all market scenarios, thus we take into consideration by looking at how long a bot has been available.

With all of these factors taken into consideration, the Trading Bot Rating system can give users a list of bots that consistently outperform others, while also factoring in user reviews. Bots that are well received by users and earn consistent profit will rank atop our marketplace rank list, earning creators more.

While we lay the foundation for modern trading bot technology, our CoiningBot is just one of many that will be available via the CoiningBot Marketplace. The goal of our marketplace is to give creators and investors a place to share and discover bots that work for them.

CoiningBot Marketplace makes the wealth of data that CoiningAI offers via its own data marketplace available to data scientists around the world. With access to that information, users will be able to create and sell their own trading bots on the CoiningBot Marketplace, earning a share of profits themselves. CoiningAI offers crucial data such as profiles, coin details, portfolios, and more for bots.

By allowing other data scientists to create their own bots, the CoiningBot Marketplace will serve as the top source for trading bots for cryptocurrency investors everywhere.

CoiningAI Social Ventures

Part of our DNA at CoiningAI is to give back to the society and make the cryptocurrency industry more inclusive. We are committing a portion of the funds we raise through our ICO, as well as a portion of the profit from our premium services, to help solve the problems that are facing the society, as well as the cryptocurrency industry.

First, our #CryptosWomenIssues campaign will work to make the cryptocurrency industry more inclusive of women. Cryptocurrency remains extremely unpopular among women and one of our goals is to fix that by offering our premium service free for 6 months to a select group of women. We will also provide them with some XAI tokens to jumpstart their trading. Additionally, we will provide trading tips using our tools on how to maximize profits from the provided XAI tokens. This will help these new investors earn more profits from the initial donation and will also help

bring many new investors to the crypto trading scene. Furthermore, we will also find other minority groups that are not as active in the crypto trading and will do similar campaigns to increase their participations, as well.

Second, our #PayItForward campaign will use cryptocurrency to help charitable organizations and struggling families around the world. Crypto trading has helped a lot of people to make a lot of money, and if they want to give back to the society, we help them by providing the platform to help. We plan to work with charitable organizations and NGOs (Non Governmental Organizations) to find legitimate struggling families to make sure the money goes to the actual needy people.

How It Works:
- Charitable organizations or projects from NGOs create XAI wallets.
- Donors select the charitable organizations or the specific projects from NGOs they want to donate to.
- Donors decide the amount they want to pay in XAI and sends the money to CoiningAI.
- CoiningAI uses CoiningBot to do the trading with that money and periodically takes out profits and sends the periodic gains in XAI to the charitable organizations or NGO project's XAI wallet. CoiningAI takes only the minimum processing fees for providing the service, but does not take any percentage from the profit gains for these social ventures.
- All the transactions from donor to CoiningAI and the periodic payments from CoiningAI to charitable organizations or NGO projects are through XAI coins and are recorded in the blockchain.
- Donors can always monitor how much they have contributed in several projects and can also easily monitor with the help of CoiningBot how much more is multiplied so far.

Our #PayItForward will revolutionize the charitable donations. Currently, the donations you make to a charity are one time donations. Through CoiningAI, however, you are planting a seed and the tree grows and keeps on giving fruits for life. CoiningBot trades with your donation, takes out a periodic profit and sends the money periodically to your favorite charity. All records are transparent in the blockchain, so you can always monitor how much more your money is multiplied after a period of time.

Customer Base

CoiningAI's set of products target investors across all spectrums of the industry. New investors, as well as well-versed and experienced investors, can benefit from the tools and data offered by CoiningAI to ultimately more intelligent traders.

One of the goals of CoiningAI is to make cryptocurrency more accessible to everyone, stretching across the entire world. With a global customer base, we believe we can have a dramatic affect on the cryptocurrency industry.

Product Roadmap

- 2017 Q1, Q2, Q3:
  - Founders researching crypto space
  - Working on AI tools to extract useful information from social media
- 2017 Q4:
  - Coining.AI was born
  - Work on CoiningAI Tools
- 2018 Q1:
  - Launched Coining.AI
  - Launched CoiningKit
  - Launched CoiningAI Blog
  - Launched CoiningFeed.com
  - User signup and payment system for our platform
  - New UI / UX and new website
- 2018 Q2
  - Incremental improvements
  - Strategic Partnership
  - Token Generation
- 2018 Q3
  - Hire additional Team members
  - Launch CoiningSignals
  - Work on CoiningPortfolio
- 2018 Q4
  - Launch CoiningSignals v2
  - Launch CoiningPortfolio
- 2019 Q1
  - Work on CoiningBot
- 2019 Q2
  - Launch CoiningBot

- 2019 Q3
    - Launch CoiningBot v2
    - Work on Blockchain based CoiningBot Marketplace
- 2019 Q4
    - Launch Blockchain based CoiningBot Marketplace
- 2020 Q3
    - Launch Blockchain based CoiningBot Marketplace v2
- 2020 Q4
    - Work on CoiningAI Social Venture #CryptosWomenIssues
- 2021 Q1
    - Launch CoiningAI Social Venture #CryptosWomenIssues
- 2021 Q2
    - Work on CoiningAI Social Venture #PayItForward
- 2021 Q3
    - Work on CoiningAI Social Venture #PayItForward
- 2021 Q4
    - Launch CoiningAI Social Venture #PayItForward

Team

Dr. Naushad UzZaman, CEO and Founder
Naushad is the CEO and Founder of Coining.AI. He also co-founded SocialTrendly/Blackbird.AI with Wasim in 2013 to create innovative artificial intelligence driven social analytics products.

Naushad attended University of Rochester, where he received his Masters (2008) and PhD (2012) degrees in Computer Science (Artificial Intelligence). Prior to that, he received the Vice Chancellor's Gold Medal during his undergraduate studies at BRAC University (2006). Naushad has an extensive academic and industrial background representing innovative accomplishments in the area of Artificial Intelligence. He authored more than thirty scientific papers and worked in the research divisions of renowned companies such as Microsoft, Yahoo! Research, Nuance, and Bosch. Naushad participated in the first IBM Watson Hackathon in NYC and won the first place.

Naushad developed the AI platform for SocialTrendly/Blackbird.AI and implemented the AI technology, almost all of the backend, and the first version of the frontend for Coining.AI.

Naushad's key areas of focus are in Artificial Intelligence, Big Data Analysis, Data Mining, Natural Language Processing/Understanding, Social Media Text Analysis, Information Extraction, Temporal Information Processing, Dialog Assistant, and Medical NLP.

In his spare time Naushad enjoys traveling and photography.

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Wasim Khaled, COO and Co-Founder
Wasim is the COO and Co-Founder of Coining.AI and has 15 years of experience in entrepreneurial ventures having built companies in diverse verticals including Artificial Intelligence, Fashion, E-Commerce, Manufacturing, Luxury Marketing, SEM/SEO Marketing and Live Streaming Video. His past accomplishments include growing one of his companies over 1000% in a single year, hitting #19 on Inc. 500's Fastest Growing Companies in America and earning the distinction of Inc. 500's Asian Entrepreneur of the Year that same year.

Across his various businesses, Wasim has established direct relationships with Apple, Target, Best Buy, Universal Records, Interscope Records, Lady Gaga, Bloomberg, SONY, Nintendo, L'Oreal, Patron, T-Mobile, Verizon, Blackberry, AT&T, The Superbowl, The Emmys, The Oscars and over 100 A-List Celebrities.
Prior to Coining.AI Wasim co-founded Blackbird.AI, an Artificial Intelligence Driven Threat Detection Platform focused on Public Safety and Homeland Security which graduated from NEX3's Silicon Valley Incubator in 2017 and Won first place in IBM Watson's Hackathon.

Wasim studied Computer Science and Graphic Interface Design at the University of Rochester.

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Yao-Chieh HU / Jeff, VP Technology
Jeff is a blockchain researcher, machine learning practitioner, magician and poet from Taiwan. He launched his first two tech startups in Hong Kong during undergrad and was selected as the Regional Head of the Blockchain Education Network.

Jeff invented a novel blockchain framework that won Gold Prize at the EtNet FinTech Awards and Second Prize at the Seoul UpTown E-commerce Challenge. He is also developing the first campus blockchain network in East Asia at The Hong Kong University of Science and Technology (HKUST) to build a sharing economy for professors, advanced laboratories, and students.

Jeff has worked with J.P. Morgan Chase to develop a Natural Language Processing chat bot for financial related investment and automation. He also has developed an Artificial Intelligence-based system for recognizing the stock market's movements.

At CoiningAI, Jeff is primarily responsible for Blockchain technology development and also contributes to Artificial Intelligence technologies. His Blockchain development serves as the basis of smart contracts for CoiningAI's products and services.

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Github: https://github.com/yhuag

Dr. Abul Hasnat, Principal Data Scientist

Dr. Hasnat has over 10 years of academic and industry experience with Artificial Intelligence and Data Science. With a Ph.D. in Image, Vision, and Signal technologies from the Université Jean Monnet Saint-Etienne, he specializes in machine learning technology, as well as image processing and computer vision. He also has extensive experience with pattern analysis and recognition.

Throughout his career, Dr. Hasnat has worked on projects relating to face biometrics and authentication with deep neural networks, 3D image analysis, Document image analysis and recognition, and other technologies. He has developed advanced systems for face recognition, dynamic time series data, intelligent transportation, and much more.

At CoiningAI, Dr. Hasnat focuses on the deep learning models for CoiningSignals and CoiningBot. He is responsible for developing the analytical and predictive methods necessary to tell when a coin is about to change in price. His role as Principal Data Scientist sees him play an instrumental part in CoiningAI's Artificial Intelligence, Machine Learning, and Data Science efforts.

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Dr. Nasrin Mostafazadeh, Principal Data Scientist

Dr. Mostafazadeh has years of experience in Artificial Intelligence (AI), Natural Language Processing (NLP), and Machine Learning (ML). She received her PhD at the University of Rochester with a focus on Natural Language Understanding (NLU) in the context of "predicting what happens next" given an eventful context.

She has worked at Microsoft, Google, and one of the largest private AI firms in the world doing research on various NLP and AI problems. She has developed models for tackling various tasks for pushing AI toward deeper language understanding with applications ranging from language generation to vision & language, with many of the tasks being widely adopted by researchers across academia, industry, and government. With more than 20 publications in major academic venues, she is one of the most notable NLP researchers in NLU and commonsense reasoning.

At CoiningAI, Dr. Mostafazadeh works on extracting the meaningful data from social feeds and news to power the systems behind CoiningSignals, CoiningBot and the CoiningBot Marketplace. Her work helps strip out the FUD and track where a coin price is going following important developments. She also works on our proprietary natural language processing modules. As a principal research scientist, Dr. Mostafazadeh plays a crucial role in the intelligence systems powering the CoiningAI suite of products.

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Sergey Vostrikov, Lead Platform Developer
Sergey has 12 years of unique experience in web software development. As Head of Development division, he developed various solutions for government needs, including Analysis System of Aviation Safety and Business Intelligence System of Industry and Enterprises.

Working in successful international companies, Sergey has implemented over 30 projects in different spheres: Video On Demand and Live Streaming services, games and entertainments, applications for Smart TV and Xbox, cryptocurrency trading, and data mining. He has also worked as a partner with technology companies like Microsoft, Samsung, Vympelcom, and Rostelecom. After completion of various projects, Sergey's team received Microsoft's Best Client Developer 2015 & 2016 status and become a Microsoft silver partner. Sergey has a master's degree in Software Development and Informational Technologies.

At CoiningAI, Sergey develops the backend platform and oversees frontend development, ensuring stability, performance, and more for CoiningAI users.

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Katherine Semeshina, Lead UX Designer
Katherine is an expert UI/UX designer and master of contemporary web languages. She went to school for Physics and Applied Mathematics and also has a degree in Business Administration. As a designer, she specializes in user interfaces, mobile application/interaction design and human interaction design and is also a skilled product designer, branding expert and marketer. Katherine found her love for design quite by chance while working as an Administrator in Switzerland while creating specs for her company's project workflow. She was fascinated at how

good design can look amazing and improve business processes at the same time resulting in a career change that melded business savvy, technical knowhow and an innate aesthetic sense of what works in design. That was seven years ago and she has never looked back. Katherine's business sense paired with her technical savvy made picking up coding languages easy and enables her to create designs that are ready to go for engineering teams and top down business sense.

When Katherine is not pouring over design code she loves painting, sipping espresso and going for long walks with Grace, her Doberman Pinscher.

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Robert J Salazar Jr, Community Manager

Bob is a self-taught crypto trader subscribing to the works of John Murphy for technical foundations. He has created and worked on various podcasts, created numerous training videos, and looks to bring the masses into crypto via education and compelling content. He has served as an admin for several telegram groups including the Bad Crypto Education site. He is very active in the virtual & crypto meetup scene, networking with developers, traders, investors, and other crypto market participants.

Bob is a graduate of the Colorado College with a B.A. in political science. He has an extensive and broad background in various industries and capacities. He has deep experience in the foodservice industry for Performance Food Group, Food Service Warehouse, and renewable fuels with Natural Chem Holdings. He has held roles in sales, accounts payable, finance, systems administration, WordPress management, and logistics.

At CoiningAI, Bob is serving as a community manager. Making sure social media has the most up to date answers regarding our products as relevant to the market, participants, news, and industry as a whole. Additionally, Bob will be creating a host of helpful content in the form of podcasts, explainer videos, and beyond to help our ecosystem understand and engage with crypto. Knowledge is power!

In his spare time, Bob enjoys coaching soccer, cooking, spinning house, and mountain biking.

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Chance Miller, Content Specialist

Chance is a technology writer and editor, with years of experience covering the latest developments in the tech industry. As an editor for 9to5Mac, Chance's articles were read by over 10 million people in 2017. Additionally, his work has been cited by sources such as CNBC, NPR,

Techmeme, and more, making him known for timely and thorough coverage of the most important news relating to companies like Apple, Google, and others.

Chance is pursuing a degree in Informatics and Computer Science, with an additional focus on business and finance. By combining informatics with business and an existing journalism background, he is able to take complex technologies and break them down for everyone to understand and learn.

At CoiningAI, Chance serves as the content specialist. He makes sure that CoiningAI content is well-written and easy for investors of all skill levels to understand.

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Advisors

Tommy Wang

Tommy Wang exemplifies over fifteen years of expertise in executing business strategy, corporate finance solutions and structuring complex deals. His expertise in international commerce has made him a trusted and respected business advisor.

He started his career by founding iventureLab, one of the first incubator technology firms while working closely with Center for Technology Transfer at Carnegie Mellon University. He grew the company to over 150 employees in under two years. Tommy's business proficiency found him as a board member and consultant to over 50 startup businesses looking to emulate and capitalize on his proven success.

Tommy earned his Bachelor's Degree in Electrical Computer Engineering graduating with the distinction of summa cum laude and a Master's Degree in MISM (Masters in Information Systems Management) also from Carnegie Mellon University. Tommy is renowned as the first student in Carnegie Mellon University history to complete an undergraduate and masters program in only three years.

Tommy was also the first investor in Coining.AI.

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Distribution of Coin and Cash

Token Sale Scheme

Coin: XAI
ERC20 token
Maximum tokens to generate: 500,000,000 XAI

- 30% Private and Public Token Sale
- 30% Company / Future Development
- 20% Advertising and Marketing
- 11.5% Team and advisors
- 8.5% Founders

Cost Structure

- 75% Company
- 10% Advertising and Marketing
- 9% Team and Advisors
- 6% Founders