AnChain.AI
Uniswap: Winning Trading Strategy Analysis

DeFi No. 1

Data-X Team 1

ANCHAIN.AI

How will you win?

- Find the pattern when the exchange rate between USDC and USDT is no longer 1:1
- Detect and analyze outliers of xy = k, the formula of the exchange rate of USDC/USDT on Uniswap

What is Working/Known:

- The data can be automatically downloaded by writing python request codes. (Done)
- There do exist some arbitrage opportunity among different kinds of cyber currencies. (Already Found Examples)
- There will be a large possibility that arbitrage chances appear among stabilization cyber

What is Not Working/Known:

- How to avoid time delay as we try to predict the exchange rate in real time. (e.g. Scraping data for different pair of crypto currencies need to log in different websites)
- What kind of pattern or action caused arbitrage opportunities
- The strategies or model we would like to apply to find

Reflection 1:

- We should make research on past transactions between USDT and USDC to find special outliers. The outliers may cause fluctuations in the cryptocurrency market by influencing the price of both

Reflection 2:

- We would like to focus on particular stabilization currency as a start to look into the transaction patterns. To do that, hopefully we could find out the pattern occurred before arbitrage opportunities. For example, whether there is a large investor enter into the uniswap causing the sudden change of exchange rate.

Avisor/Manager:

- Victor Fang Ph.D. from AnChain.ai

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Content

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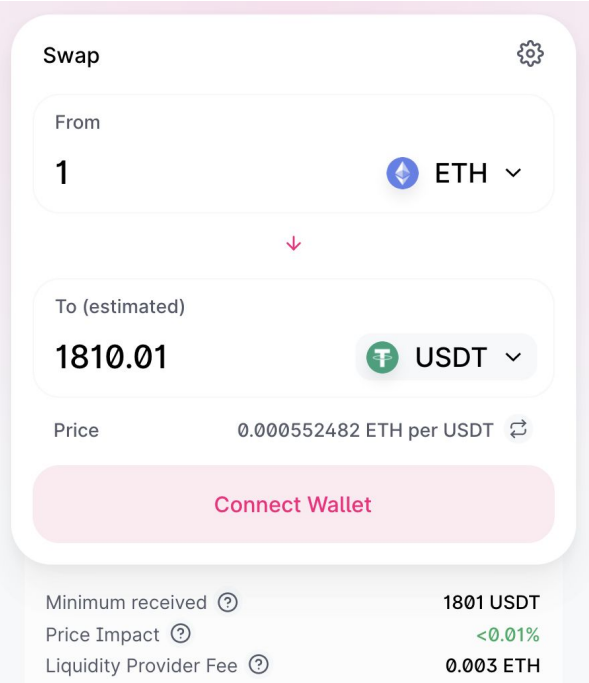
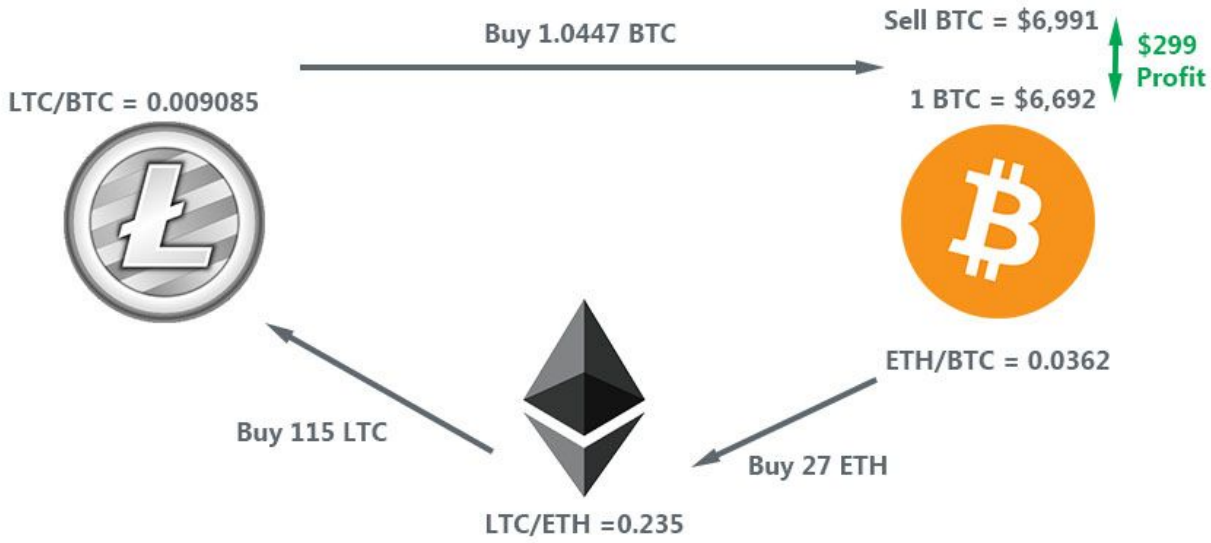
- Demand analysis (NABC)
- Technical components
- User interface
- Project plan
- Teammates introduction

Project introduction

- Uniswap: a decentralized exchange to swap two crypto assets
- Fast & Efficient: create liquidity, trade tokens, eliminate intermediaries
- Winning trading strategy analysis: make profits by “swapping” assets



Example: Use Uniswap



Example: Cryptocurrency arbitrage

Demand Analysis（NABC）

Need

Environment: Market fragmentation and inefficiencies in DeFi
Need: Effective trading strategies to seek investable trading opportunities

- **Crypto Asset Holders** strategies to aid decision making on swaps for different cryptocurrencies
- **Financial Institutions** strategies to aid decision making to optimize their whale trading strategies

Approach

1. **Analyzing:** Analyze historical trading data & strategies
2. **Models:**
   Forecasting models to predict future trading information (time, exchange rate, earnings, etc.)
   Classification models to classify customers, cryptocurrencies and transactions
3. **Matching:** Achieve automatic matching and recommendation of trading strategy and customers
4. **Optimization:** Establish feedback model optimization

Competition

- **Manually select cryptocurrency trading strategies:** Crypto asset holders and traders make their own decisions on their judgements or through a consulting firm

- **Cryptocurrency trading products:** Crypto asset holders make exchange in a less efficient way

Benefit

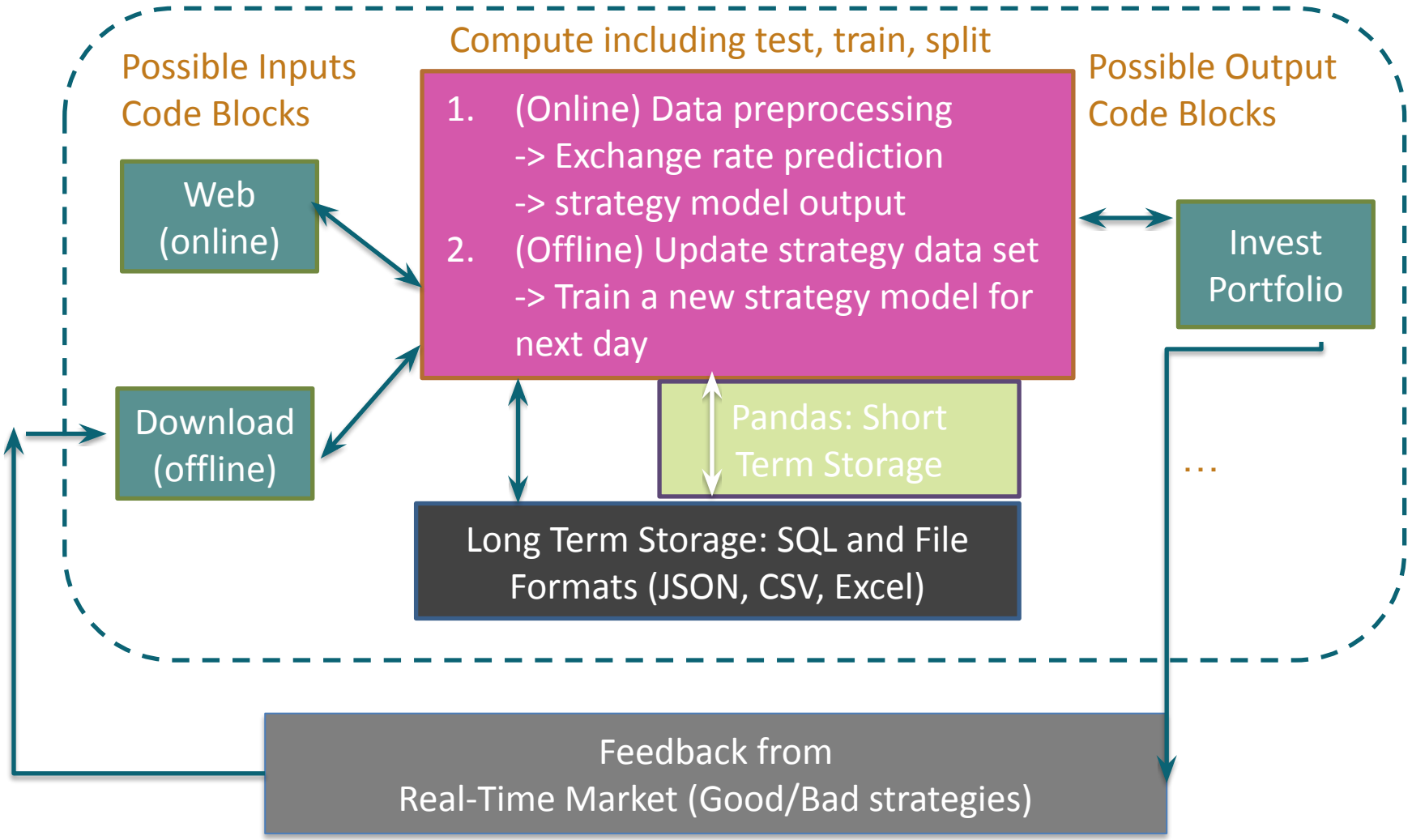
- Enhance monetary liquidity

- Provide a more secure market for crypto transactions

- Increase wining profitability based on trading strategies

Note that: Color Code Orange or Red: Lines you need to learn to do; Color Code Green: Lines which will be easy to develop

System Architecture



Potential Algorithm Choices

Naive

Regression models for exchange rate prediction
-Kernel Ridge Regression
-Gaussian Process Regression
-Autoregressive Integrated Moving Average
...

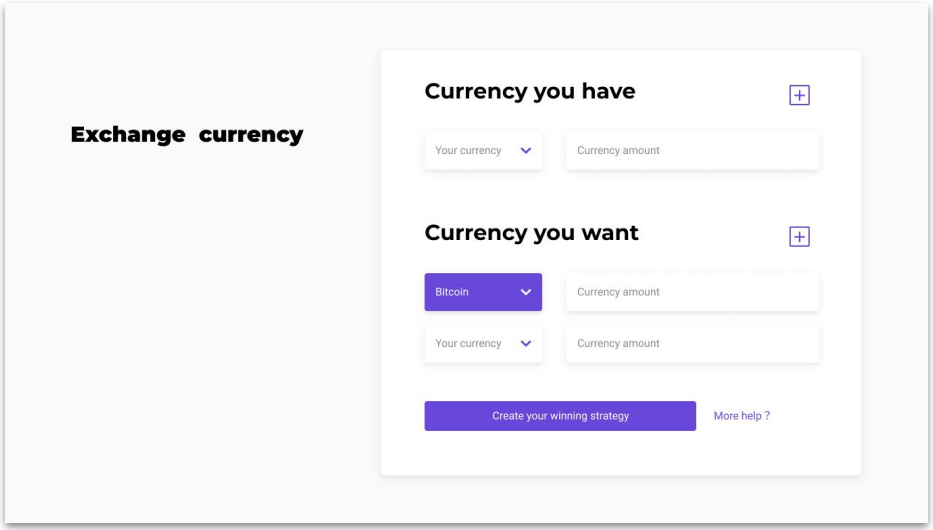
Classification models for risk identification
-Logistic Regression
-SVM
-Neural Network based methods
...

Advanced

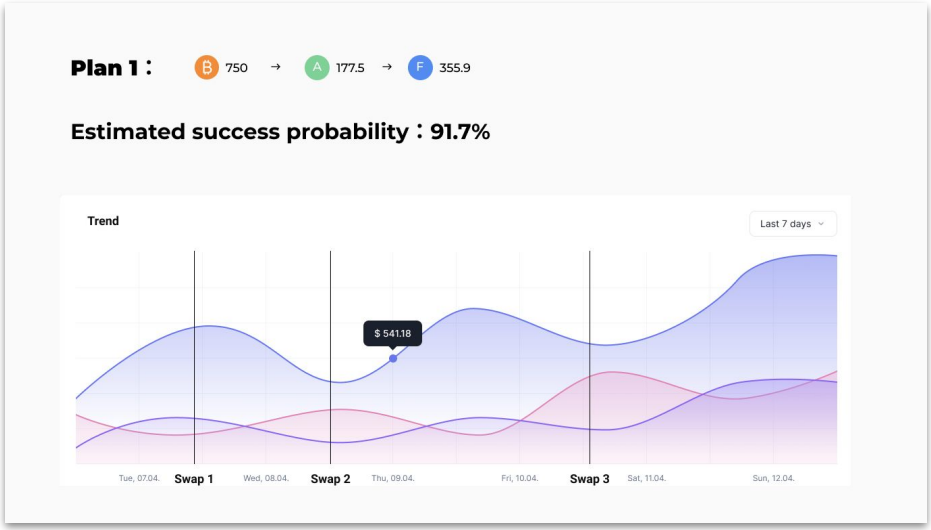
Transfer learning models for common patterns of winning strategies
-Transfer Component Analysis
-Domain Adaptation methods
...

Reinforcement learning models for generate optimal invest strategy
-Q-learning
-Policy Network
-Deep Resnet + Monte Carlo Tree Search
...

UI Illustration

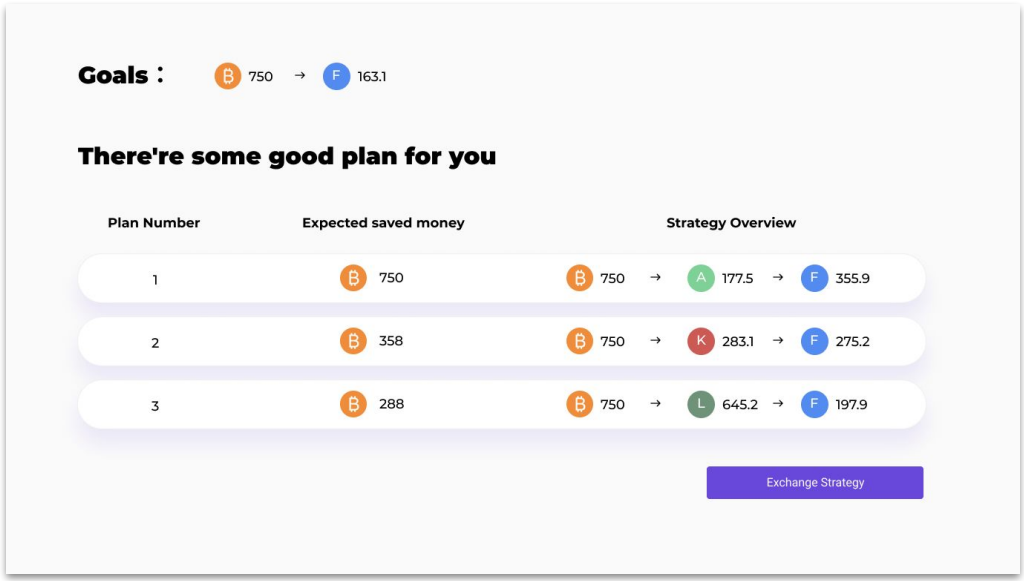


Input expectation



See one in detail

Show all strategies



Next Steps

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9-10
Data Query	**Understand the data and EDA: Data Visualization/feature selection -Team**								
	Data Accessing								
Modeling	**Feedbacks from mentors and adjusted EDA -Team**		**Algorithm selection and implementation - ZZ, LL, KF,YC**						
			Prediction and Classification Models Automatic Matching and Recommendation						
Validation						**Iterate algorithm to get feedbacks and optimization - KF, ZH, YC, ZZ**			
						Feedback Model Optimization			
UI							**Interface design: Dashboard to portray data points - SY, LL, ZH**		**Test and Feedbacks**
							UI		
Demo				**Testing and Demo**		**Testing and Demo**			**Demo; experts feedbacks**

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Team 1 : Uniswap - Winning Trading Strategy Analysis (AnChain.AI)

Our product will help crypto asset owners identify winning trading strategies in asset swapping and discover real-time opportunities in the market.

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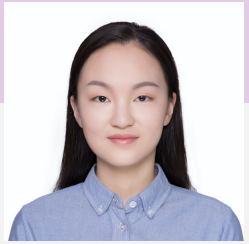

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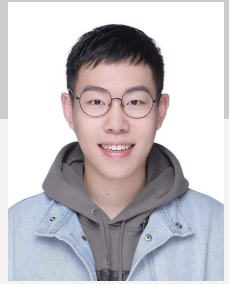

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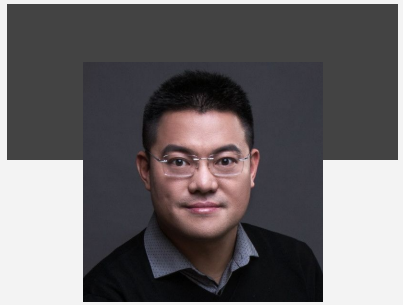

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THANK YOU FOR LISTENING