DEVxDAO Milestone 3 Documentation

API Definition for:

- Limit & delta alerts by emails
- Portfolio Modeling
- Support for a wallet (TBD)
- API calls for swap, add & remove liquidity
- ‘Robo-trading for AMMs’ by combining alerts and swap functionality
- UI/UX for portfolio modeling, historical analysis, & robo-trading

API Definition for Limit & delta alerts by emails

Alerts

GET `/alerts/`

Return the current alerts for the user.

CODE SAMPLES

Alerts

```
curl --location -g --request GET '{{host}}/v2/alerts/' --header
                'Authorization: {{UserToken}}'
```

REQUEST

REQUEST HEADERS

* Authorization	string	{{UserToken}} "Token " + token returned during authentication.

RESPONSE

200 204

EXAMPLE SCHEMA

OBJECT

```
{
  id*: integer                  Unique idenitification number for this alert (integer)
  alert_name*: string           ↘ User defined name for alert
  alert_description*: string    ↘ User defined description for alert
  liquidity_pool*: integer      Liquidity Pool monitored for alert
  alert_type*: integer          1 = Delta alert type alerts difference between now and alert_delta_period
  field_name*: string           Sender's token B balance at the time of the swap
  alert_condition*: string      '<' or '>'
  alert_amount*: number         Amount to alert for
  alert_delta_period*: integer  Period to monitor for change. Used only with Delta alert type.
  send_email_alert*: boolean    true/false - if true, send an email to alert_email when alert is triggered.
  alert_email*: string          Email address to send email to when alert is triggered. Example: support@fluidefi.com
  alert_state*: boolean         true/false - if true, monitor for alert condition. If false, do not monitor for alert.
  alert_repeats*: boolean       true/false - if true, wait alert_delta_period and set alert
}
```

API Definition for Portfolio Modeling

Portfolio Model Asset

GET `/portfolio_assets/{id}/`

Get the assets in the user List

REQUEST

PATH PARAMETERS

* id string	**Pattern:** ^[\w\-\.]+$	

RESPONSE

200

EXAMPLE | SCHEMA

OBJECT

```
{
  ONE OF
  1 {
    lp_list: integer|null                 Id of the list.
    liquidity_pool: integer|null          Constraints: Min -2147483648 | Max 2147483647
    contract_address: string|null         Constraints: Max 42 chars
    currency: integer|null                ↘ Currency this investment is made in.
    lp_amount: decimal|null               Pattern: ^-?\d{0,64}(?:\.\d{0,0})?$
    token_address: string|null            Constraints: Max 42 chars
    token_amount: decimal|null            Pattern: ^-?\d{0,64}(?:\.\d{0,0})?$
    weight: number|null
  }
  2 {
    lp_list: integer|null                 Id of the list.
    liquidity_pool: integer|null          Constraints: Min -2147483648 | Max 2147483647
    contract_address: string|null         Constraints: Max 42 chars
    currency: integer|null                ↘ Currency this investment is made in.
    token_address: string|null            Constraints: Max 42 chars
  }
}
```

RESPONSE

200

EXAMPLE | SCHEMA

Example 1

```
{
  "lp_list": 0,
  "liquidity_pool": -2147483648,
  "contract_address": "AAAAAA",
  "currency": -2147483648,
  "lp_amount": "^-?\d{0,64}(?:\.\d{0,0})?$",
  "token_address": "AAAAAA",
  "token_amount": "^-?\d{0,64}(?:\.\d{0,0})?$",
  "weight": 0
}
```

RESPONSE

200

EXAMPLE | SCHEMA

Example 2

```
{
  "lp_list": 0,
  "liquidity_pool": -2147483648,
  "contract_address": "AAAAAA",
  "currency": -2147483648,
  "token_address": "AAAAAA"
}
```

Portfolio Model Update

GET `/portfolio_model_update/{id}/{sk}/{tk}/{ek}/`

Add or remove assets to/from a portfolio model.

CODE SAMPLES

Example

```
curl --location --request POST 'http://127.0.0.1:8000/portfolio_update/118/add/86/'
```

REQUEST

PATH PARAMETERS

* `ek` string	asset: contract_address - Liquidity pool or ERC-20 token contract address number to add or remove.
* `id` string	Portfolio model number for action.
* `sk` string	Action: • add - Adds the amount specified for the asset to portfolio model id. If the asset already exists, the weight is UPDATED with the value passed. • del or delete - Deletes the asset from portfolio model id.
* `tk` string	weight: float - Weight (percentage amount) relative to the investment amount. **Note:** sum of all weights CAN exceed 100%; this is calculated as leveraged.

REQUEST HEADERS

* `Authorization` string	{{UserToken}} "Token " + token returned during authentication.

RESPONSE

200 | 201 | 202 | 400 | 401

Ok

Support for a wallet (TBD)

FLUIDEFI will support the new Casper Wallet by MAKE software. At this time, the product was just released into Beta.

API Definition for API calls for swap, add & remove liquidity

POST Swap

Open Request →

http://127.0.0.1:8000/swap/

Sends a swap transaction with a path of arbitrary length.

REQUEST

JSON formatted request with the key string in quotes, followed by a colon, and the value. (See example)

Key	Required	Value	Description
mode	required	exactinput	For executing swaps with an exact amount of input asset
		exactoutput	For executing swaps with an exact amount of output asset
path	required	list of strings	List of token addresses for the swap path. First item in the list is ETH for swaps from ether, or last item in list is ETH for swaps to ether.
amount_in	required for exactinput swaps	integer	Used for exact amount of input asset for exactinput swaps. Used for desired amount of input asset for exactoutput swaps. If amount_in is not provided or is 0 for an exactoutput swap, the desired amount of input asset will be determined using the current market rates. Amount provided must be an integer value representing the smallest units of the given asset.
amount_out	required for exactoutput swaps	integer	Used for exact amount of output asset for exactoutput swaps. Used for desired amount of output asset for exactinput swaps. If amount_out is not provided or is 0 for an exactinput swap, the desired amount of output asset will be determined using the current market rates. Amount provided must be an integer value representing the smallest units of the given asset.
recipient	optional	string	Address for recipient account of output tokens. If recipient is not provided, the output tokens will be transferred to the sender's account.
deadline	optional	number	Amount of time in seconds for the transaction to complete, after which time it will revert. The default value is 300 seconds (5 minutes).
slippage	optional	number	Maximum allowable percent deviation from desired output amount for exactinput swaps or desired input amount for exactoutput swaps. Valid range of values for slippage is 0 - 100. The default value is 2%.
gas_price	optional	integer	Desired gas price in wei for transaction. If not provided, competitive gas price will be determined prior to sending the transaction to the blockchain.
network	optional	string	Network upon which the transaction will be broadcasted. Current choices are 'mainnet', 'ropsten', 'kovan', 'rinkeby', 'goerli', or 'fluidefi' for FLUIDEFI's private testnet. Default value is 'mainnet' for Ethereum mainnet.
platform	optional	string	Specifies the platform on which transaction will be executed. Default value is 'uniswapv2'.

Response

Key	Description
input_token	Address of input token or 'ETH' for swaps from ether (first asset in path)
output_token	Address of output token or 'ETH' for swaps to ether (last asset in path)
request_amount_in	Input amount used in function call to the router
request_amount_out	Output amount used in function call to the router
sender_input_token_balance	Sender's input token balance at the time of the swap
transaction_hash	Hash of sent transaction
status	Status from transaction receipt: 1 for success, 0 for failure
revert_reason	Revert reason from EVM when receipt is received with a status of 0
actual_amount_in	Actual amount of input asset used in swap
actual_amount_out	Actual amount of output asset received from swap
response_code	FLUIDEFI response code representing a warning or error
message	Message associated with given response code

Request Headers

Authorization	Token c8cc4e8edbf7be9e2cf13a46895b5a915e311850
	"Token " + token returned during authentication

Body raw (json)

json

```
{
  "mode": "exactinput",
  "path": [
    "ETH",
    "0xd60E64886c4e3Bb592feceE73752cA94bFe10677"
  ],
  "amount_in": 1000000000000000000,
  "network": "fluidefi"
}
```

Example

Swap - example 1

Request

cURL

```
curl --location --request POST 'http://127.0.0.1:8000/swap/' \
--header 'Authorization: Token c8cc4e8edbf7be9e2cf13a46895b5a915e311850' \
--data-raw '{
    "mode": "exactinput",
    "path": [
        "ETH",
        "0xd60E64886c4e3Bb592feceE73752cA94bFe10677"
    ],
    "amount_in": 1000000000000000000,
    "network": "fluidefi"
```

View more

Response

Body Headers

json

```
{
  "transaction_hash": "0xccaf713f8d370108e0f2f3ce6a5ff443a5cbff2946bf6a08a9eeb982d5546e1c"
  "status": 1,
  "input_amount": 1000000000000000,
  "output_amount": 614166402732122200000
}
```

View more

API Definition for API calls for add & remove liquidity

POST Add Liquidity

Open Request →

http://127.0.0.1:8000/add_liquidity/

Adds liquidity to an ERC20/ERC20 or ERC20/WETH pool.

REQUEST

JSON formatted request with the key string in quotes, followed by a colon, and the value. (See example)

Key	Required	Value	Description
token_a	required	string	Address of token_a or ETH for adding to ERC20/WETH pool
token_b	required	string	Address of token_b or ETH for adding to ERC20/WETH pool (only one of token_a or token_b can be ETH)
amount_a	required	number	Desired amount of token_a. Amount provided must be an integer value representing the smallest units of the given asset.
amount_b	optional	number	Desired amount of token_b. If amount_b is not provided or is 0, the desired amount of token_b will be determined using the current pool reserves. Amount provided must be an integer value representing the smallest units of the given asset.
recipient	optional	string	Address for recipient account of output tokens. If recipient is not provided, the output tokens will be transferred to the sender's account.
deadline	optional	number	Amount of time in seconds for the transaction to complete, after which time it will revert. The default value is 300 seconds (5 minutes).
slippage	optional	number	Maximum allowable percent deviation between desired and minimum amounts for each input token added to liquidity. Valid range of values for slippage is 0 - 100. The default value is 2%.
gas_price	optional	integer	Desired gas price in wei for transaction. If not provided, competitive gas price will be determined prior to sending the transaction to the blockchain.

Response

Key	Description
token_a	Address of token A or 'ETH' for adding liquidity to an ERC20-WETH pool
token_b	Address of token B or 'ETH' for adding liquidity to an ERC20-WETH pool
request_amount_a	Desired amount of token A used in function call to the router
request_amount_b	Desired amount of token B used in function call to the router
sender_token_a_balance	Sender's token A balance at the time of the swap
sender_token_b_balance	Sender's token B balance at the time of the swap
transaction_hash	Hash of sent transaction
status	Status from transaction receipt: 1 for success, 0 for failure
revert_reason	Revert reason from EVM when receipt is received with a status of 0
actual_input_amount_a	Actual amount of token_a added to pool
actual_input_amount_b	Actual amount of token_b added to pool
output_amount_lp	Actual amount of LP tokens received by adding liquidity to pool
contract_address	Contract address of the pool to which liquidity was added
response_code	FLUIDEFI response code representing a warning or error
message	Message associated with given response code

Body raw (json)

json


```
{
  "token_a": "ETH",
  "token_b": "0xd60E64886c4e3Bb592feceE73752cA94bFe10677",
  "amount_a": 1000000000000000000,
  "network": "fluidefi"
}
```

Example Add Liquidity - example 1

Request

cURL


```
curl --location --request POST 'http://127.0.0.1:8000/add_liquidity/' \
--header 'Authorization: Token c8cc4e8edbf7be9e2cf13a46895b5a915e311850' \
--data-raw '{
    "token_a": "ETH",
    "token_b": "0xd60E64886c4e3Bb592feceE73752cA94bFe10677",
    "amount_a": 1000000000000000000,
    "network": "fluidefi"
}'
```

Response

Body Headers

json


```
{
  "transaction_hash": "0x8274614f831c59f423b1af6858396b4186c9c28586eec5d52760813abf81122d"
  "status": 1,
  "input_amount_a": 100000000,
  "input_amount_b": 98000000000000000000,
  "output_amount_lp": 313049516848972,
  "contract_address": "0xF2CAD68d8dF26ff7C189c9F185Fa3e76a5612f14"
}
```

View more

API Definition for API calls for remove liquidity

POST Remove Liquidity

Open Request →

http://127.0.0.1:8000/remove_liquidity/

Removes liquidity from an ERC20/ERC20 or ERC20/WETH pool.

REQUEST

JSON formatted request with the key string in quotes, followed by a colon, and the value. (See example)

Key	Required	Value	Description
token_a	required	string	Address of token_a or ETH for removing liquidity from an ERC20/WETH pool
token_b	required	string	Address of token_b or ETH for removing liquidity from an ERC20/WETH pool (only one of token_a or token_b can be ETH)
liquidity	required	number	Desired percent of owned liquidity to remove from pool (0 - 100)
amount_a	optional	integer	Desired amount of token_a to receive after removing liquidity. If amount_a is not provided, it will be determined from the current reserve ratio and number of LP tokens owned by the sender. Amount provided must be an integer value representing the smallest units of the given asset.
amount_b	optional	integer	Desired amount of token_a to receive after removing liquidity. If amount_b is not provided, it will be determined from the current reserve ratio and number of LP tokens owned by the sender. Amount provided must be an integer value representing the smallest units of the given asset.
recipient	optional	string	Address for recipient account of output tokens. If recipient is not provided, the output tokens will be transferred to the sender's account.
deadline	optional	number	Amount of time in seconds for the transaction to complete, after which time it will revert. The default value is 300 seconds (5 minutes).
slippage	optional	number	Maximum allowable percent deviation between desired and minimum amounts for each output token removed from liquidity. Valid range of values for slippage is 0 - 100. The default value is 2%.
gas_price	optional	integer	Desired gas price in wei for transaction. If not provided, competitive gas price will be determined prior to sending the transaction to the blockchain.

Response

Key	Description
token_a	Address of token A or 'ETH' for removing liquidity from an ERC20-WETH pool
token_b	Address of token B or 'ETH' for removing liquidity from an ERC20-WETH pool
transaction_hash	Hash of sent transaction
status	Status from transaction receipt: 1 for success, 0 for failure
revert_reason	Revert reason from EVM when receipt is received with a status of 0
input_amount_lp	Actual amount of sender's LP tokens burnt by removing liquidity
actual_output_amount_a	Actual amount of token_a received after removing liquidity
actual_output_amount_b	Actual amount of token_b received after removing liquidity
contract_address	Contract address of the pool from which liquidity was removed
response_code	FLUIDEFI response code representing a warning or error
message	Message associated with given response code

Request Headers

Authorization	Token c8cc4e8edbf7be9e2cf13a46895b5a915e311850 "Token " + token returned during authentication

Body raw (json)

```json
{
  "token_a": "ETH",
  "token_b": "0xd60E64886c4e3Bb592feceE73752cA94bFe10677",
  "liquidity": 2,
  "network": "fluidefi"
}
```

Example

Remove Liquidity - example 1

Request

```curl
curl --location --request POST 'http://127.0.0.1:8000/remove_liquidity/' \
--header 'Authorization: Token c8cc4e8edbf7be9e2cf13a46895b5a915e311850' \
--data-raw '{
    "token_a": "ETH",
    "token_b": "0xd60E64886c4e3Bb592feceE73752cA94bFe10677",
    "liquidity": 2,
    "simulate": true
}'
```

Response

Body Headers

```json
{
  "transaction_hash": "0x0265798d9621e2e5249990d546784d44416a6c815aa913f59efae90a41da0203"
  "status": 1,
  "input_amount_lp": 313049516848972,
  "output_amount_a": 99999999,
  "output_amount_b": 960399999996941700000,
  "contract_address": "0xF2CAD68d8dF26ff7C189c9F185Fa3e76a5612f14"
}
```

View more

API Definition for ‘Robo-trading for AMMs’ by combining alerts and swap functionality

POST `/bot_settings/`

REQUEST

REQUEST BODY* application/json

EXAMPLE | SCHEMA

OBJECT

```
{
  network: string                          ↘ Network to which the user_wallet belongs. Current supported option is 'mainnet'
  user_wallet*: string                     ↘ 0x-prefixed Ethereum wallet address corresponding to the account managed by the bot
  bot_id: integer                          unique identifier for the bot
  bot_is_enabled*: boolean                 Set to true to enable to the bot, false to disable it.
  liquidity_pools*: [string]               ↘ ➞ [ list of liquidity pool contract addresses to include in the analysis for rebalancing capital ]
  rebalancing_frequency_hours*: integer    ↘ interval between portfolio rebalancing operations, in hours
  data_frequency*: string                  ↘ granularity of data used in analysis. Options are 'H', '4H', 'D', 'W', 'M'
  lookback*: integer                       ↘ Number of periods used in returns analysis (periodicity is based on the data_frequency field)
  currency*: string                        ↘ currency used to evaluate returns. Options are 'ETH' and 'USD'
  returns_delta_threshold: number          Constraints: Min 0
  rebalancer_address: string               Constraints: 42 to 42 chars
  strategy: string|null                    Constraints: Max 100 chars
  stop_loss_level: integer|null            Constraints: Min 1
  take_profit_level: integer|null          Constraints: Min 1
  cool_off_period: integer|null            Constraints: Min 0
  max_loss_factor: number|null             Constraints: Min 1e-10
  data_start_date: string|null             Constraints: 10 to 10 chars
  stable_pool: string|null                 Constraints: 42 to 42 chars
  rebalancer_retries: integer|null         Constraints: Min 1 | Max 20
  analyzer_retries: integer|null           Constraints: Min 1 | Max 20
  disable_initializer: boolean|null
  disable_optimizer: boolean|null
  disable_analyzer: boolean|null
  disable_rebalancer: boolean|null
  initializer_dry_run: boolean|null
  rebalancer_dry_run: boolean|null
}
```

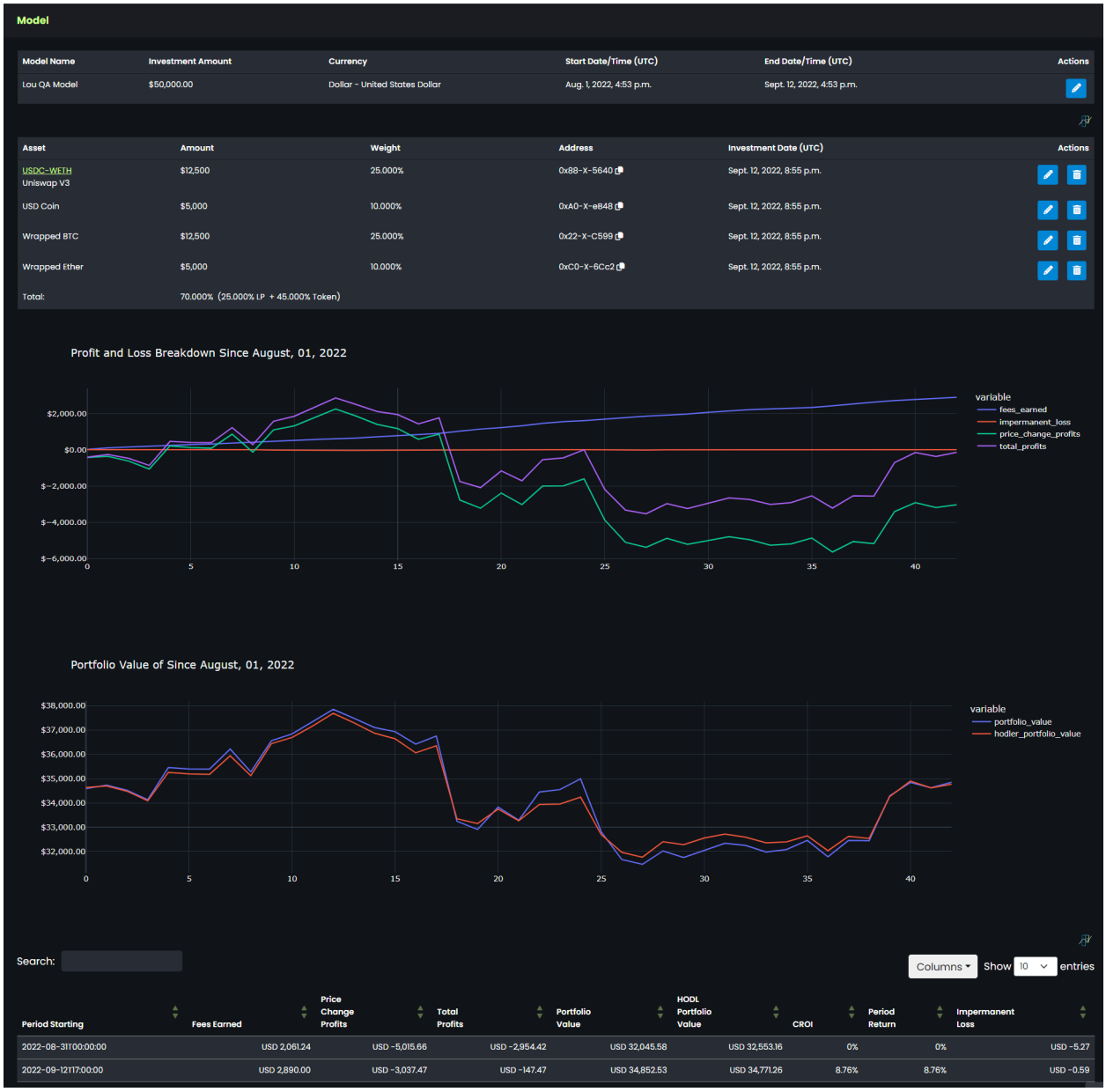
RESPONSE

200

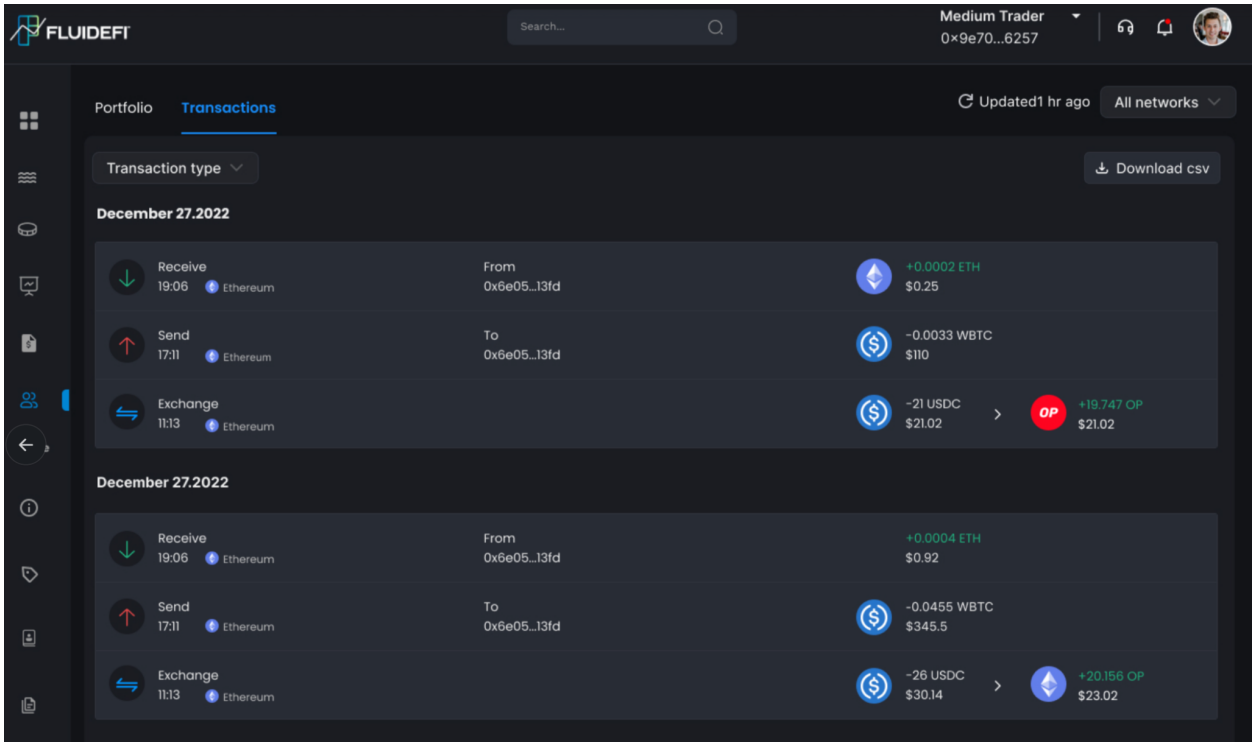
EXAMPLE | SCHEMA


```
[
  {
    "bot_id": 100,
    "user_id": 1179,
    "user_wallet": "0xAb275524e36B071Ea8f16Af23E58aB38C94c5EBB",
    "data_frequency": "D",
    "rebalancing_frequency_hours": 168,
    "lookback": 21,
    "currency": "USD",
    "bot_is_enabled": true,
    "network": "mainnet",
    "returns_delta_threshold": 0,
    "settings_are_valid": true,
    "validation_error_message": "null"
  }
]
```

UI/UX for portfolio modeling



UI/UX for historical analysis


FLUIDEFI
Search...
Medium Trader
0×9e70...6257
Portfolio
Transactions
Updated1 hr ago
All networks
Transaction type
Download csv
December 27.2022
Receive
19:06 Ethereum
From
0x6e05...13fd
+0.0002 ETH
$0.25
Send
17:11 Ethereum
To
0x6e05...13fd
-0.0033 WBTC
$110
Exchange
11:13 Ethereum
-21 USDC
$21.02
+19.747 OP
$21.02
December 27.2022
Receive
19:06 Ethereum
From
0x6e05...13fd
+0.0004 ETH
$0.92
Send
17:11 Ethereum
To
0x6e05...13fd
-0.0455 WBTC
$345.5
Exchange
11:13 Ethereum
-26 USDC
$30.14
+20.156 OP
$23.02

UI/UX for robo-trading