

Web-Frontend for Bitcoin-Trading Bot

Degree programme : BSc in Computer Science | Specialisation : Data Engineering
Thesis advisor : Prof. Dr. Kai Brännler
Expert : Andeas Fischer

Spiniceps AG operates Bitcoin trading bots that turn volatility into profit by selling and buying Bitcoins based on its price. A web interface allows customers to manage and configure their trading bots. The already existing software automatically creates and maintains buy and sell orders based on certain parameters on the Bitfinex cryptocurrency exchange. The aim of this project is to extend and improve this web interface with new features.

Initial situation

Becoming more popular over time, many people see opportunities in buying various cryptocurrencies or trying out trading. However, this can be risky for people who do not have much experience or knowledge in this field. This is where Spiniceps AG comes in, turning that volatility into profit with the help of its trading bots in a safer and more user-friendly way. Most of the functionalities of the existing software are available through the command line interface, which is not convenient for non-technical users. Therefore, a more user-friendly web interface has been created, where the client can register by joining his Bitfinex exchange account and manage his trading bots. The customer has the possibility, according to different parameters, to create and edit his bots, to activate or deactivate them, and to delete them. However, the web interface is not yet complete and needs to be extended and improved.

Goals

The main goal is to make some features of the existing software available in the web interface as well as to make improvements and modifications to the already existing frontend. The software being already used in production implies that the requirements and the work to be done vary according to the clients' highest priority needs. In addition, during development, there could be changes of mind and questioning, which meant stopping the development, changing the approach, or moving to a more important task.



The dashboard where the trading bots can be managed.

Implementation

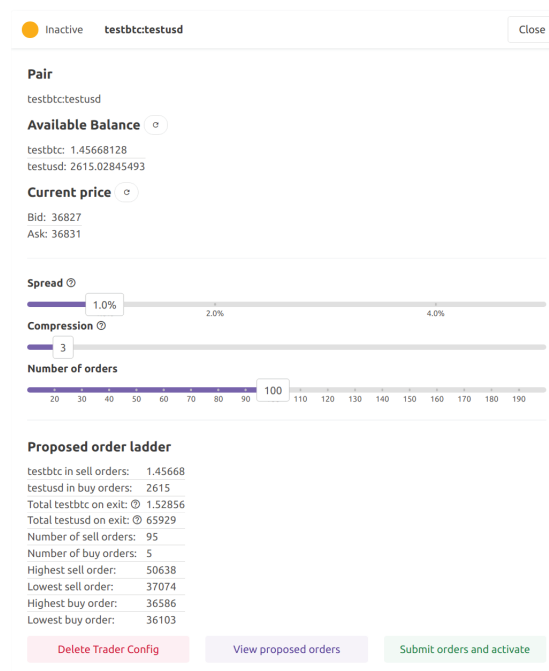
The technologies used are mainly Vue.js for the frontend and Python for the backend as well as various libraries such as Marshmallow for the API data validation and SQLAlchemy for the database. Here the backend acts as an intermediary for the frontend which allows interaction with the existing software and the Bitfinex API. This is done by creating REST API endpoints accessible from the frontend using the Axios HTTP client.

Results

This work allowed to improve, simplify the interaction and bring new functionality to the web interface. The most important enhancement is the ability to visualize the active orders. Some features developed during this project are not yet in production and may



Patrick René Grosschmidt
p.grosschmidt@gmail.com



Trading bot edition form.