[An Online Web-Streaming Service for Bitcoin-Excahnges]

Project Progress



Information Technology Capstone Project

COMP5703

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# Progress & Achievements

Our group was able to successfully connect to Bitfinex and HitBTC API and stream historical as well as realtime data in the front end. The streamed data from the API is displayed using react-stockcharts library. The candle chart can now show real time and historical data along with the MACD indicators showing the moving averages of bitcoin prices.

The Login authentication system is fully functional which includes the login features through Github and Google.

# Obstacles

One of the major issues of the project was with the delay in the backend mainly due to the lack of resources (developers). Due to the delay, the group unfortunately missed the milestone. The group was able to rectify the issue by allocating more resources (developers) to assist with the backend.

The project had a steep learning curve, where members were required to familiarize themselves with React.js, react-stockcharts library, passport.js and socket.io for streaming realtime data.

Yangkai:

1) Using react-stockcharts library to implement candlestick chart component with MACD indicator was difficult. But Karim solved this problem.

2) Learned Ant Design, which is a React UI framework to improve components’ quality. It took us a while to get familiar with it.

3) For WebSocket modules, we have tried ws, react-websocket and socket.io. Finally, we decided to use socket.io because of its simplicity and scalability.

4) At first, there is some confusion in our code structure. We spent some time to split front-end code into different folders (components, layouts, pages, services) to make it more clear and manageable.

5) It took us some time to deal with gaps between real-time data and historical data.

6) We haven’t found a solution to render large dataset in a real-time chart, so we set a number limit (e.g. 5200) of data points.

7) It is a little hard for us to use react router v4 at the beginning.

Ken - For social login module, the original plan of implementing Facebook and Twitter strategy required higher security standards (e.g. using “https” protocol, privacy statement URL, etc.) which didn’t fit in our technical stacks and meet our demands. Therefore, the team all agreed to shift the plan into implementing Google and GitHub login strategy as alternative solution.

# Deviation to Timeline

Highlight and describe deviations to the original timeline. You should explain the reason why there are changes to the original planning.

* HitBTC candle data storage service
* Order book data storage & API services
* Github login service

# Milestones & Reporting

Describe the planned timeline and any updates to the original plan here. You can show the changes to the original plan in different colour.

|  |  |  |  |
| --- | --- | --- | --- |
| **Milestone** | **Tasks** | **Reporting** | **Date** |
| Week-1 | Analysis and design stage, gather data and create system mockup | Client meeting to review the project | 11-03-2018 |
| Week-2 | ~~Architecture design~~ This plan moved to Week-3. We need to spend more time to understand the current system. | Client meeting to review the work plan | …… |
| Week-3 | Design work plan | None |  |
| Week-4 | Create database | None |  |
| Week-5 | Proposal Report Due |  |  |
| Week-6 | Create GUI | Client meeting to review GUI |  |
| Week-7 | Integration with iPhone environment | None |  |
| Week-8 | Testing | None |  |
| Week-9 | Progress Report Due |  |  |
| Week-10 | Deployment | Client meeting to deploy the system |  |
| Week-11 | Documentation |  |  |
| Week-12 | Final Presentation |  |  |
| Week-13 | Final Report (thesis) |  |  |