Project Brief

Stonks Academy Trading Simulator

Company Information

Stonks Academy is a tech startup that builds products and courses to help inexperienced investors and traders become more effective. They want to build a tool to help stock traders test their investment strategies based on the information provided in their courses. This app will be branded under their name and be the sole property of Stonks Academy.

Project Description

This app aims to create a tool for new investors and traders to practice their skills and strategies without risk of losing any money. It will provide a lot of the currently available tools to analyze the live market on data from the past to practice their strategies as if it was a previous date. This will allow new investors to quickly learn what strategies are the most effective without the need to wait days or months to see their profitability. Additional tools to help investors with their analysis will be included to help them create an effective trading strategy, such as courses and performance metrics through a fake broker.

User Base

Two major user groups would be using this application. They are listed and described below:

Retail Traders

These users are people learning stock trading for the first time but don't have the money or the time to devote to learning one of the more complex tools to start developing their trading strategies. They may watch the market casually and make trades as opportunities come or are heavily invested in quickly refining their strategies to maximize their earning potential. They are cheap and don't like expensive subscriptions, and don't have the focus to learn some of the more complex and clunky tools on the market.

Beginning Investors

These users may be students learning finance in school or individuals interested in more institutional investing, looking at growth strategies over long periods of time. They want to see how different strategies will benefit them over months and years without waiting to see how they do in real-time. They also may be hobbyists or students that don't have much money to

devote to an expensive monthly subscription and want an interface that looks modern and functional.

Competition

Chart Mill

This website provides a simple historical stock screening service that can screen stocks with different filter criteria at any date in the last ten years. The filter options are limited, and the interface is clunky. For specific use cases, it is helpful. It could be improved if there were more configurable options and the interface used better control input besides dropdown menus to filter the screener.

Trend Spider

This web app uses data science and other advanced AI tools to help make stock trading decisions and provides a back-testing framework. It is a very advanced tool that can do stock back-testing, but it is expensive at $70 a month and could be intimidating to a beginner.

Trading View

This tool is primarily a stock screening and viewing tool. It provides back-testing functionality but is very simple and has no advanced features. It also doesn't have a historical stock screener vital to back-testing strategies.

Think or Swim

This is a desktop application that many stock traders use to manage their accounts with TD Ameritrade. It has a feature called "On Demand" that will let you trade as if you were at a past date. It doesn't provide any historical stock screening functionality essential for almost any strategy to work, making this tool very ineffective.

Overall

After reviewing several tools in the market these are what current applications do well and are lacking in for our target consumer group.

Positive Features:

- Viewing stock charts and using tools to analyze those charts
- Stock screeners that are pliant in their use of controls to filter stocks
- Historical stock programs that allow you to keep track of "paper" trades through a fake broker

Negative Features

- Price for hobbyist stock traders
- Filter controls that are limited by the use of drop downs instead of sliders or text entry inputs
- High complexity that causes a barrier to beginner use

Functionality

Users will create an account that will store their login information such as email and password. If they already have an account with Stonks Academy from their courses, then they can use the same account. All of their data will be stored on a remote server so that they can move devices and keep their same account data.

The platform will have a mock broker to keep track of a user's portfolio and trade execution. Users can decide whether to use a cash or margin account to determine how trading will be dictated and configured if real-world trading restrictions are applied, such as the pattern day trader rule and margin interest.

Articles and courses will be available to help teach the new investors as they practice their strategies from the Stonks Academy platform.

Users can move the current time base of the application to any date within the last 15 years to practice trading from. All search results, stock charts, and screeners will display as if it is that date to practice trading strategies. Users can search for stocks, view stock meta information, and charts from 1-minute intervals to 1-week intervals. A stock screener will be available to filter current stocks in the market by specific search criteria such as technical or fundamental analysis indicators.

Free features include 1-day interval stock screening at any date, but to use any of the advanced broker or analysis features a paid subscription of $15 a month is required for the pro version. This payment can be made on the app through an integrated payment system such as stripe. The pro version status and the user's payment information will be stored and connected to the user's account.

Platform

This application could be used on a desktop computer and on a mobile device. The primary audience for this application would prefer a desktop platform for its screen real estate to show essential data all in one view and do strategy research for long periods. More casual users would gravitate towards a mobile device to research strategy as they have time and are on the go. Provided this project is focused on mobile users and that mobile application development requires greater clarity and simplicity, the platform that will be designed for is a mobile smartphone on the iOS or Android operating system. The app will be a native application to increase performance and integrate native-only features such as biometric authentication and push notifications.