FINBERRY

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ABSTRACT

The Finberry platform is an online web application that allows registered users to explore investing and stock trading through an educational lens.

With simulated trading, integrated coaching, and educational articles, the platform provides several tools that cater to a wide user base.

Users can compete with one another by entering contests for prizes and rankings.

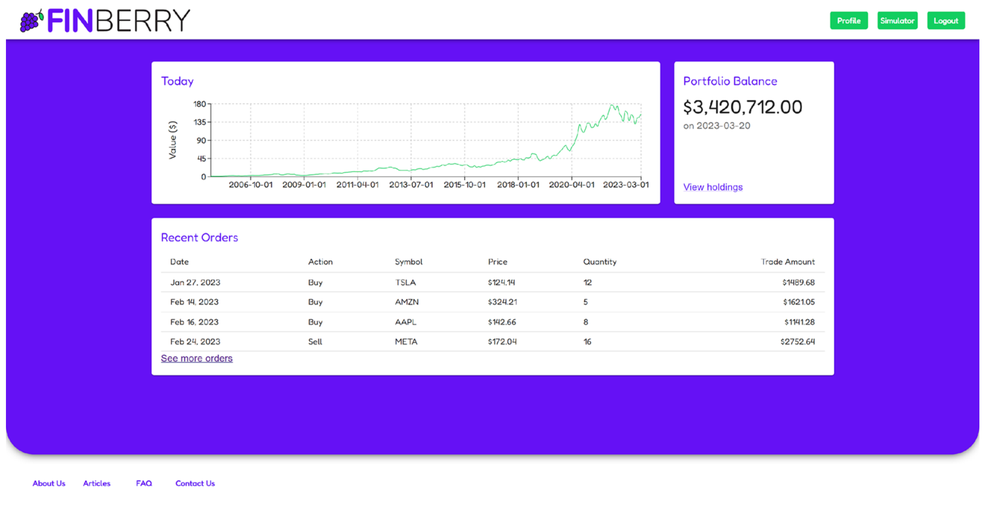

Figure 1. Portfolio View

STACK

Finberry is a fully-responsive web application that has been built using React Typescript, Express, NodeJS, MongoDB, Twelve Data, Stripe, and Firebase.

STOCK TICKER

The hardware stock ticker device is another component of this capstone project. It is powered by a Raspberry Pi and a 5V 4A power supply, with a 64x32 RGB LED Matrix display for data visualization. The device pulls API data from a user's Finberry account portfolio to display real-time stock updates, which can help users make informed decisions.

The device costs $370 to manufacture and is offset by premium memberships and ad revenue. Eventually, it will be available for purchase in our online shop, providing a physical representation of investment portfolios. It is also a potential prize that a user can win through an annual simulated contest. The hardware stock ticker is an innovative and practical tool for anyone looking to learn and invest in the stock market.

Figure 2. Stock Ticker Preview

DISCUSSION

Finberry was first ideated with the intent of providing a risk-free environment for new investors to learn in. We also wanted to develop for financial coaches a platform to meet with and guide their clients. Through market research and analysis of existing solutions, we determined that there is potential to have an even greater impact with this application.

We set out to find what we can do to bridge the gap between what simulated tools currently offer and what people seek from said tools.

After surveying students at the University of Calgary, we found the following statistics:

- 71.2% of people felt that their trading knowledge was 5 or below out of 10
- 60.0% of people learn through hands-on experience
- 84.3% would consider financial coaching

With this information, along with guidance from our academic, technical, and business advisors and Launchpad coach, we set out to build a new platform. This application would provide both literary and gamified resources for users to gain more investing experience and become financially empowered. In additional to simulation tools and educational articles, Finberry aims to allow users with investing experience to coach other users and potentially earn a commission. Users can participate in daily, weekly, and monthly contests to compete with users across the platform.

SCHEMA

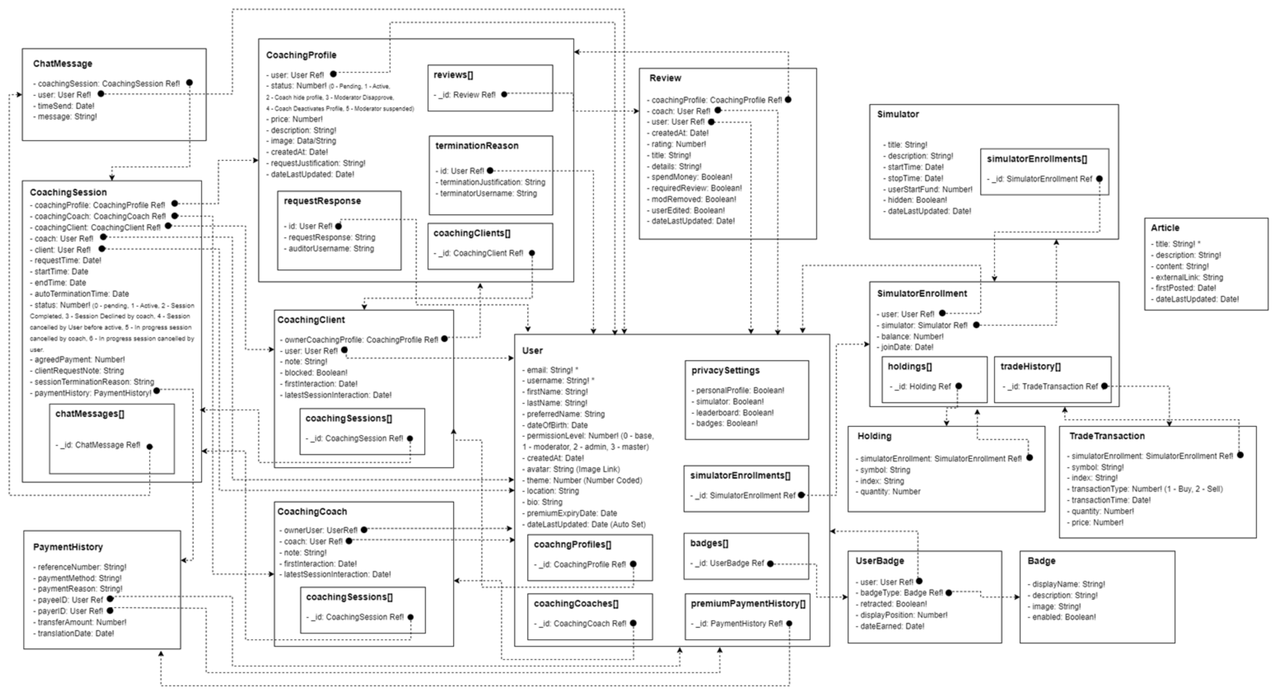

Figure 3. DB Schema Overview

To support a growing web application, we elected to use a NoSQL database for our application. This enables several advantages for our application such as scalability, flexibility, performance, and cost-effectiveness. With NoSQL, our application is capable of scaling horizontally, flexibly handling different types of data and data models, and operating faster than traditional relational databases.

RESULTS & FUTURE

Currently, Finberry is operating live at www.finberry.ca with features such as simulated investing, educational articles, coaching, leaderboards, and stock ticker connectivity.

In the near future, we will be implementing and enabling additional features to support plus & enterprise memberships, contests, awards, and user messaging.