Wall Street Wizard:
Stock Market Simulation Game Using Flask

C. V. Suresh Babu

https://orcid.org/0000-0002-8474-2882
Hindustan Institute of Technolgy and Science, India

V. Surendar
Hindustan Institute of Technology and Science, India

EXECUTIVE SUMMARY

The stock market is a complicated and often scary arena for people inexperienced with the financial world. Stock market simulation games have been designed to solve this issue by allowing users to study and engage with the market in a fun and engaging way. This study proposes the construction of a stock market simulation web application using Flask, which will allow users to create demo accounts, learn how to purchase and sell stocks, manage their portfolios, and do real-time stock market analysis. This simulation will be intended to make stock market learning accessible and pleasurable for all users. The goal is to develop an interactive platform that educators can use to teach economics and finance to students in a fun and engaging way. This chapter will discuss how the proposed simulation would differ by including real-time analysis and a focus on portfolio management. Through the simulation, users will learn how to make educated decisions based on market research and diversify their investments to minimize risks, leading to a more financially literate society.

INTRODUCTION

Economics permeates every facet of society, influencing individual choices and the broader trajectories of nations. However, in K-12 classrooms, its foundational concepts can sometimes feel elusive to young students. Essential notions such as supply and demand, trade, and market mechanics, though vital, can challenge novice learners. While the integration of stock market games into economics education isn't a novel concept (Dale, 2002; White & Wagner, 2021), this chapter introduces a distinct angle: the promotion of real-time interfaces for educators. Previous studies have emphasized the benefits of gamifying economic principles and investment strategies (Al-Bahrani et al., 2018; Fabian, 2021; Lew & Saville, 2021; Rogmans, 2018). White and Wagner (2021) stood out by developing a game that encourages educators to customize interfaces. However, this work further innovates by integrating an interface with live data.

To demystify these economic ideas, educators are gravitating towards inventive classroom-specific tools. Economic simulation games have emerged as a particularly effective resource in this regard. These simulations immerse students in the world of economics, offering a hands-on platform to grapple with market strategies, gauge the repercussions of their choices, and see economic postulations in action. At the core of our endeavour is the crafting of an online economic simulation game designed specifically for K-12 students. This game, rooted in the Flask framework, grants students the autonomy to simulate economic events, steer trading choices, allocate assets, and decipher up-to-the-minute data. The ultimate aspiration? To evolve traditional economics teaching into a vibrant, participatory learning adventure.

While educational platforms like EconEdLink and Practical Money Skills already exist, our game's distinguishing feature is its incorporation of real-time data. This element introduces students to the ever-changing landscape of economics, underscoring the fluidity of decisions and their resultant outcomes. Moreover, our game champions analytical prowess, prompting students to scrutinize patterns, make educated decisions, and foster a profound grasp of economic systems.

RESEARCH PROBLEM

The issue addressed in the existing work is the requirement for efficient and interesting teaching strategies for students learning economics and finance concepts. It has been discovered that traditional teaching methods for these subjects, like lectures and textbooks, are less engaging and might not produce the best learning outcomes (Ray, 2018). The related work, therefore, seeks to investigate the use of game-based learning and supporting instructors in using cutting-edge technologies, as potential

Related Content

Transferable Belief Model
Philippe Smets (2009). *Encyclopedia of Data Warehousing and Mining, Second Edition (pp. 1985-1989).*
www.irma-international.org/chapter/transferable-belief-model/11091

Classification of Graph Structures
Andrzej Dominik (2009). *Encyclopedia of Data Warehousing and Mining, Second Edition (pp. 202-207).*
www.irma-international.org/chapter/classification-graph-structures/10821

Survival Data Mining
Qiyang Chen (2009). *Encyclopedia of Data Warehousing and Mining, Second Edition (pp. 1896-1902).*
www.irma-international.org/chapter/survival-data-mining/11078

An Introduction to Kernel Methods
Gustavo Camps-Valls, Manel Martínez-Ramónand José Luis Rojo-Álvarez (2009). *Encyclopedia of Data Warehousing and Mining, Second Edition (pp. 1097-1101).*
www.irma-international.org/chapter/introduction-kernel-methods/10958

Feature Reduction for Support Vector Machines
Shouxian Chengand Frank Y. Shih (2009). *Encyclopedia of Data Warehousing and Mining, Second Edition (pp. 870-877).*
www.irma-international.org/chapter/feature-reduction-support-vector-machines/10922