

Project: WealthFrontier

WealthFrontier is an innovative and engaging investment simulation game designed to teach players the fundamentals of personal finance, investment strategies, and market behavior. Inspired by the success of games like Buildyourstax, WealthFrontier takes the experience to the next level with the addition of new, more challenging features to make the game more challenging. Features may include random economic events (e.g., recessions, booms, inflation spikes), stock price analysis graph, gambling, and potentially more. Players will have 20 years to build their investment portfolios, with \$5,000 in the beginning of the year. There will be a leaderboard at the end of the game, whoever makes the most money at the end is the victor.

TP1 Update: Savings and CDs have been incorporated into the game. As the game progresses, players should be able to unlock more investment strategies such as index funds, government bonds, stocks, etc. There should also be a “gambling” feature where players could bet a certain economic event will happen or if they achieve X amount of money by the end of the game. Multiplayer mode might not be possible so this game might have to be more on the player versus the computer.

TP2 Update: Stocks have been added into the game as well as stock price chart. Leaderboard is working. Need to work on adding in economic events and its impact on stock prices. If time permits, government bonds will be added.

TP3 Update: Game is completed. Actual computer AI playing the game instead of randomizing the computer’s score. Added to economic events that affect the stock prices. Added in a pie chart that displays percentages of the components of your net worth. You can alternate between candlestick and line chart by clicking on ‘m’. Added endscreen and revamped home and instruction screens.

Similar Projects

Kathryn Anderson: [Investing Made Easy](#)

- Structure of the game might be worth looking into

Swapnil: [Building portfolio investment decision tool](#)

- Potentially be used to make an AI who will participate in the game,
- Research on what investment decision is correct

Connor O’Keefe: [Locksley Investing](#)

- Simulation on stocks might be useful

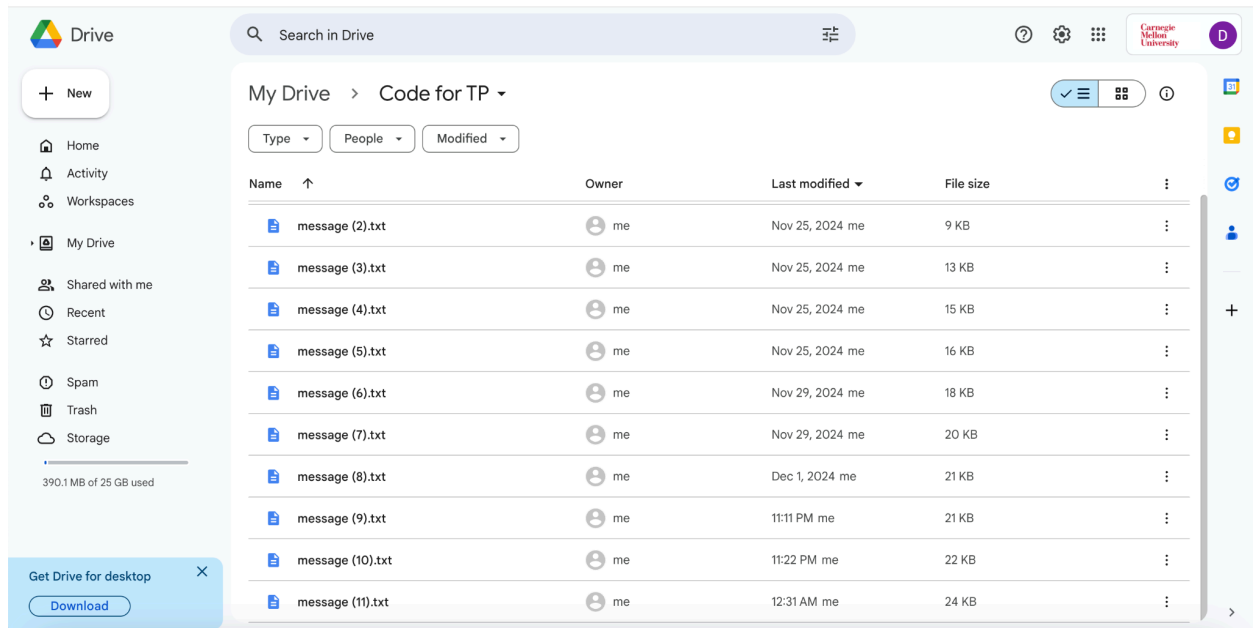
Version Control / Backup Plan

Programming Language: Python (for backend logic and in VS code)

Cloud Backup: Google Drive (for backups), also just copying and pasting my code into Notes

Tech List

- So far no external modules/tech/hardware being used



References:

- Trevor Santiago. "Simulating Stock Prices With Monte Carlo Methods - Trevor Santiago." Youtube, uploaded by Trevor Santiago, Dec, 9, 2020, <https://www.youtube.com/watch?v=dYiZAgSUY8U>. Accessed 1 Dec. 2024
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- Beazley, D. (2009). A Python Book: Beginning Python, Advanced Python, and Python Exercises, <https://www.dabeaz.com/action/stockclass.html>. Accessed 25 Nov. 2024
- GeeksforGeeks. "Enumerate() in Python." GeeksforGeeks, GeeksforGeeks, 23 Sept. 2023, <https://www.geeksforgeeks.org/enumerate-in-python/>. Accessed 30 Nov. 2024

