Mini Strategy Analysis Project

The goal of this mini project is to test your ability to setup a full mini project from beginning to scratch which involves getting the right data, using external APIs, looking out for lookahead bias, detail orientedness and usability. We prioritize speed and accuracy at Quanta so please try to accomplish this task as quickly as possible, but with 100% accuracy. In finance, accuracy is critically important so ensure that there's no lookahead bias or other data issues.

Challenge:

Write a python program to test this thesis:
- If a stock has volume on a day that is >200% (X%) the average daily volume over the last 20 days AND it is up at least 2% (Y) on that day compared to the previous day, it shows it might be "breaking out". We should buy it when that breakout happens and hold it for 10 (Z) days and see what the return is if we did that every time.

Your task is to create a program that works like this:
1. User goes to a link and inputs the following:
    a. Ticker
    b. Start Date and End Date
    c. Percent Volume Breakout Threshold (Minimum Percent that the volume that day is above the last 20 days average volume so if set at 200% that means the volume that day is 200% greater than the average volume over the last 20 days)
    d. Daily Change Threshold (Minimum Percent that the stock is up on the day of the volume breakout over the previous day)
    e. Holding Period (How many days to hold the investment before selling)
    f. Generate Report Button
2. After clicking generate report, it should create a google sheet or downloadable CSV with statistics that shows what days exceeded the volume breakout threshold AND the price change threshold. Those are the "buy" days. Then it shows the results for each of those days which means what would be the return if the investor bought at the close of that breakout day and held for 10 (Z) days.

Deliverables:
- Share the link to your program
- Explain your process of how you set it up (what data you used etc) and any roadblocks you had in setting everything up and how much time the whole project took you

***If you have any questions or want clarification on anything before you start or during the project, let me know anytime at evan@quantaventures.ai or text me 740.972.6939