Assignment 3: Interactive Visualizations

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Link to Google Sheets Data

For more details, you can access the feedback data in the Google Sheets document here: Feedback Form Responses.

Objective

This study gathered feedback from 12 participants to assess the usability and clarity of stock market visualizations designed to illustrate trading signals and portfolio risk-return profiles.

Summary of Insights

Insight 1: High Usability and Visual Appeal

Participants overwhelmingly rated the visualizations as highly user-friendly, with most describing the navigation as "Very easy." The layout and visual appeal of the interface also received positive feedback, with users noting that the clean design and well-organized controls made the interaction smooth and engaging. Users highlighted specific aspects, such as the intuitive placement of dropdowns and the ability to adjust timeframes, which contributed to a pleasant and accessible experience.

- **Observation:** Users quickly adapted to the interface, with only minor suggestions for further refinement of zoom controls.

- **Recommendation:** Maintain the current layout and design approach while continuing to explore ways to further optimize the zoom feature for precise control.

Insight 2: Effectiveness in Illustrating Trading Signals

The moving averages area chart was highlighted as an especially useful tool for interpreting trading signals. Participants valued the shaded crossover regions as they effectively indicated potential buy/sell points, making it easier to spot short-term and long-term trends. The timeframe selection feature allowed users to compare movements over 3-month, 6-month, and 1-year periods, which enhanced their ability to assess both immediate and gradual price changes.

- **Observation:** Users found the visual cues in the area chart particularly intuitive and insightful for identifying trading signals.

- **Recommendation:** Keep the shaded crossover design and consider adding tooltips for new users to clarify the significance of these signals.

Insight 3: Understanding Portfolio Risk and Return

Most participants agreed that the risk-return scatter plot helped them understand how different portfolio allocations affect performance, especially in relation to risk tolerance. Users appreciated the dynamic, interactive approach of the scatter plot, which allowed them to observe how risk impacts potential returns. However, some users indicated a need for more guidance on financial terms, like "efficient frontier," to fully understand the concept of optimal portfolio allocation.

- **Observation:** While the scatter plot effectively demonstrated portfolio performance, some technical terms required further clarification.

- **Recommendation:** Integrate tooltips or short definitions for terms like "efficient frontier" to enhance comprehension, particularly for users less familiar with financial theory.

Insight 4: Suggestions for Additional Enhancements

While feedback was largely positive, participants did suggest small improvements that could further enhance usability and clarity:

- **Add Tooltips:** A few users mentioned that tooltips would provide extra guidance for technical terminology, improving accessibility for beginners.

- **Expand Visualization Options:** One participant expressed interest in seeing more plot types, which could deepen insights for those with a specific focus on stock analysis.

- **Observation:** The suggestions reflected an interest in a more interactive and informative experience for users at all levels.

- **Recommendation:** Consider adding brief explanations for technical terms and exploring additional visualization options to cater to advanced users.

Overall Satisfaction

Participants expressed a high level of satisfaction, with most rating their experience as "Very satisfied." Users enjoyed the interactivity and clarity of the visualizations, finding them both informative and engaging. The interface successfully helped them answer key questions about trading signals and portfolio risk, fulfilling the study's objective to provide insights into stock trends and risk-return profiles.