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Note: Please complete all columns, especially the last two columns. Thank You.

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| --- | --- | --- | --- | --- |
| Day of week | Time of Day  From - To | Description of Activity | Individual or Group? | Duration |
| Monday | 12.30 pm – 2.30 pm   1. pm – 12 am | * Create GitHub repo: * Add README.md with goals and instructions * Install R packages: tidyquant, ggplot2, dplyr, lubridate * Use quantmod or tidyquant to pull stock data (e.g., AAPL, MSFT, NVDA) * Clean & save as stock\_data.csv | Individual | 4 hours |
| Tuesday | 1 am – 2 am  10 am – 12 pm  3 pm – 4 pm  10.30 – 11 pm | * Explore trends in closing prices, volume, and daily returns * Create:   + Line plot of closing price   + Histogram of daily returns   + Moving average (7, 30 days) |  | 4.5 hours |
| Wednesday | 11 am – 2 pm | * Calculate standard deviation, beta, and correlation matrix * Compare stocks' risk levels * Use heatmaps and bar plots |  | 3 hours |
| Thursday | 9 am – 11 am  2 pm – 3 pm | * Add intro, methodology, results, and conclusion * Embed plots with interpretation |  | 3 hours |
| Friday | 10 pm - 2 am | * Import cleaned CSV * Create:   + Interactive line chart for price trend   + Filter by company/date   + KPIs: Max return, highest volume, volatility |  | 4 hours |
| Saturday | 2 pm – 4 pm  11 pm – 1 am | * Upload all files * Push.Rmd, stock\_data.csv, and plots * Update README.md with sample images and instructions * Add link to Tableau dashboard (if created) * Write and save Weekly Activity Log in /activity\_log/ | individual | 4 hours |
| Sunday | 11 am – 3 pm | * Final code cleanup * Comment all R code * Submit the log to Canvas or the appropriate platform | individual | 3.5 hours |

Comments: I enjoyed working with Tableau and creating dashboards this week—it was fun to turn data into something visual and interactive. I also found the process of calculating standard deviation interesting, as it introduced me to the concept of volatility, which was completely new to me. Learning how these calculations reflect stock risk gave me a deeper understanding of financial analysis.

External Help: I used ChatGPT to explain to me what volatility means. I also used ChatGPT to help me solve errors that I encountered in RStudio when I started to write the code.

Please list the link to any external materials you have used to assist you with your course project. This could be a YouTube link, a LinkedIn link, etc.

1. <https://www.kaggle.com/datasets/samanfatima7/nvidia-stocks-historical-data>
2. <https://www.fidelity.com/learning-center/smart-money/what-is-volatility>
3. <https://www.investopedia.com/terms/s/standarddeviation.asp>
4. <https://www.youtube.com/watch?v=DOL4Xvn3Frw&ab_channel=MichaelEvans>
5. <https://link.springer.com/article/10.1007/s10479-016-2138-z>

What were your contributions to the course project?

1. **Collected and cleaned historical stock data** (Apple, Microsoft, Nvidia, Google) from Yahoo Finance for the period 2004–2023.
2. **Calculated daily returns** for each dataset using R, including handling date formatting and lag functions.
3. **Computed statistical measures** such as standard deviation (volatility) and beta (vs Apple) to analyze stock risk.
4. **Generated a correlation matrix** to understand the relationships between different tech stocks.
5. **Created multiple visualizations in Tableau**, including line charts for closing price trends and histograms of daily returns.
6. **Compiled all analysis into a structured RMarkdown report** and exported it to HTML.
7. **Organized and documented the project on GitHub**, including code, datasets, commit messages, and folder structure.
8. **Wrote summaries, interpretations, and reflections**, including trend analysis, correlation insights, and learning reflections.
9. **Engaged in research planning**, including outlining an extended 12-week roadmap for continued analysis.
10. **Participated in data storytelling**, using dashboards and written narratives to make insights clear and compelling.