Cara O'Dwyer, 12/6/2025

Oxford Risk Internship Task – EDA Summary

This exploratory data analysis combines financial personality data and asset data to examine individual traits and investment behaviors. A key objective was to identify the individual with the highest total assets in GBP and evaluate their risk tolerance.

Key Result

Individual with Highest GBP Assets:

- **ID:** 48
- **Total GBP Assets:** 299.99
- **Risk Tolerance Score:** 0.532

Data Overview

- **Personality dataset:** 297 individuals with 5 traits.
- **Asset dataset:** 786 entries with asset types, currencies, and values.
- Merged via `_id`, linking traits with asset holdings.

Data Cleaning

- No missing values found in combined dataset.
- No duplicate entries.
- Converted `created` column to 'datetime' for any future time-series analysis.

Histograms

- Below is a histogram to show the distribution of assets amongst those with GBP.

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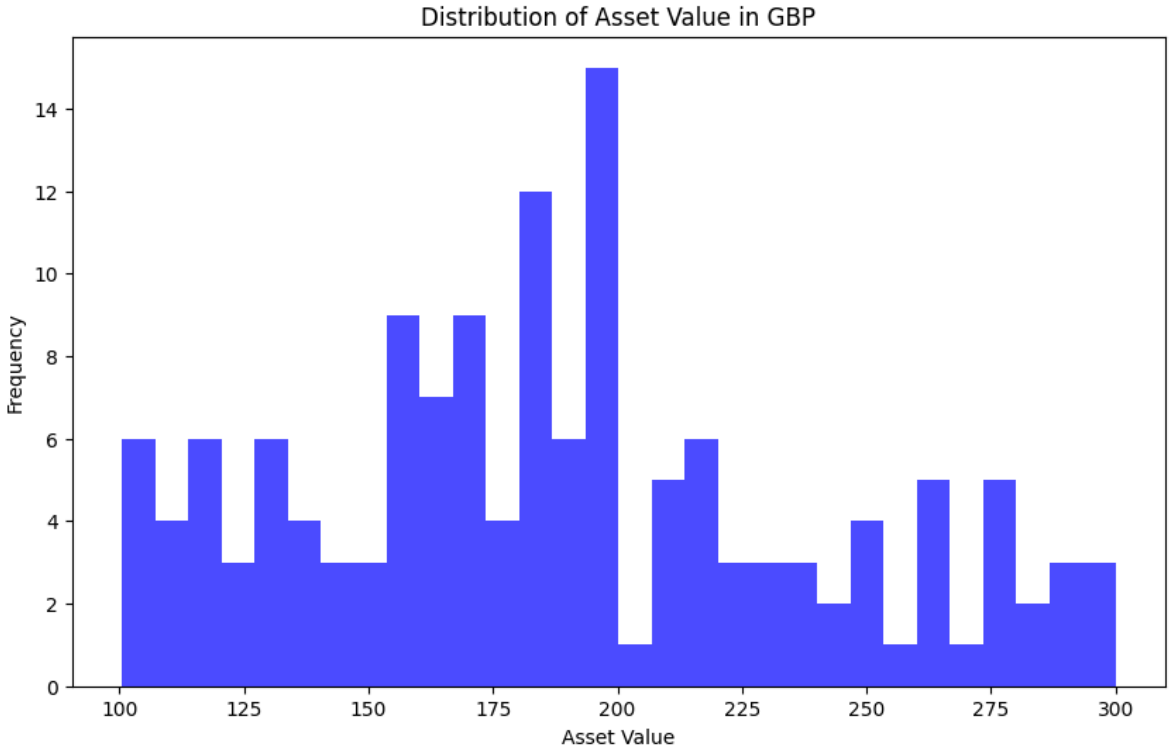
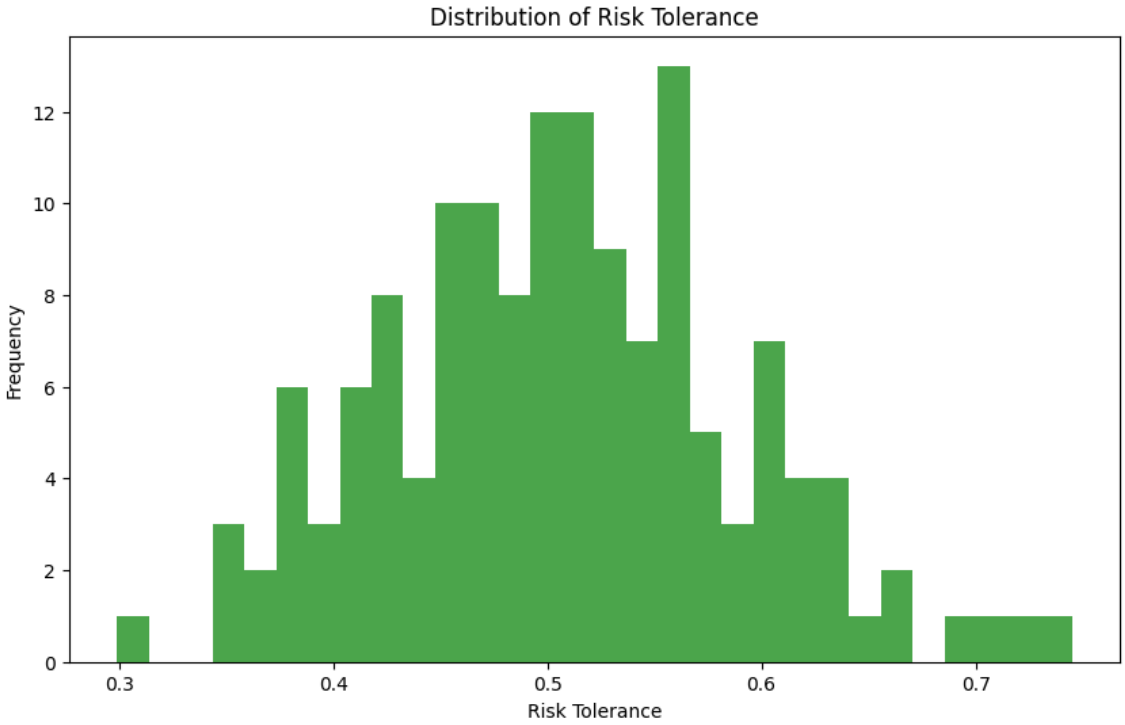


Below is a histogram to show the distribution of risk tolerance.



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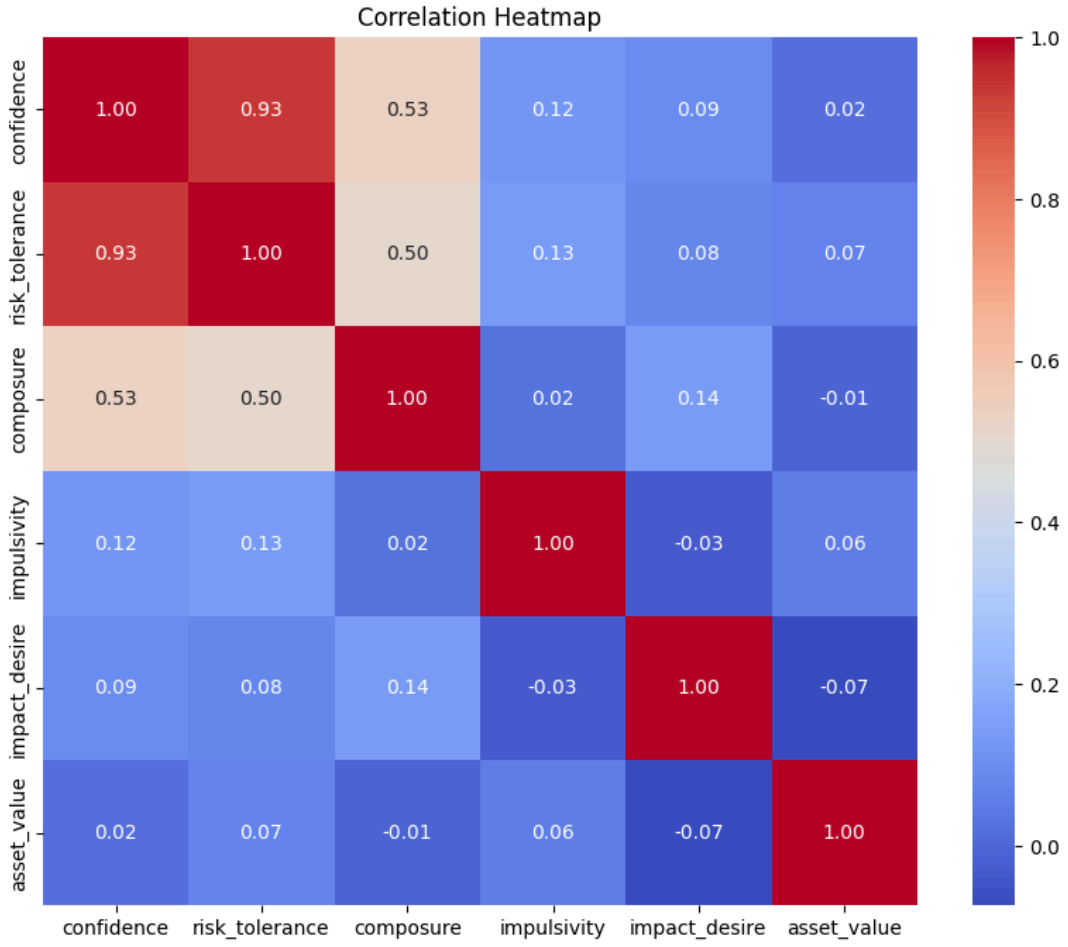
Exploratory Insights

📈 Risk Tolerance Distribution

- Normal-like distribution between 0.3–0.75.
- Indicates a balanced spread of financial risk preferences among individuals.

🔍 Correlation Insights

- **Risk Tolerance** had moderate correlation with **confidence** and **composure**.
- **Impulsivity** was slightly negatively correlated with other traits.
- No strong correlation between any traits and asset value



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Conclusion

This analysis successfully merged personality and asset datasets to identify the individual with the highest GBP-denominated asset holding and to explore potential behavioral patterns within the data. The individual with the highest GBP assets (ID 48) demonstrated a moderate risk tolerance, suggesting that high GBP holdings are not exclusive to high-risk profiles.

Key findings show that while financial personality traits such as risk tolerance, confidence, and composure are distributed, they do not exhibit a strong correlation with GBP asset values in this dataset. Moreover, the distribution of GBP assets was relatively narrow, indicating consistent asset values among individuals, regardless of trait variation. This may point to a more regulated or uniform asset environment, or it could suggest that other external factors (e.g., income, market behavior) drive asset accumulation more than psychological traits alone.

Overall, this task underscores the value of integrating behavioral data with financial metrics, while also highlighting the complexity of drawing predictive conclusions from isolated personality traits. A deeper, multi-factor analysis could be beneficial for uncovering more nuanced patterns in investor behavior.