Investment Decision Recommendation System Project

Instructions: You are provided with a dataset containing information about individuals and their investment behavior. Your task is to build a recommendation system that can predict the best investment decision for new data based on various factors available in the dataset.

Data Exploration:

1. Analyze the demographic distribution (gender, marital status, age) among individuals in the dataset.
2. Explore employment details such as roles, career stages, and income brackets represented.
3. Investigate investment behavior insights including the percentage of household income invested, sources of awareness about investments, knowledge levels, influencers, risk levels, and reasons for investment.

Best Investment Decision Identification:

1. Based on the dataset, identify factors that contribute to making the best investment decision.
2. Determine which demographic, employment, and behavioral characteristics correlate with successful investment outcomes.

Recommendation System Development:

1. Utilize machine learning techniques to build a recommendation system that can predict the best investment decision for new data.
2. Consider using algorithms like decision trees, random forests, or neural networks to model the relationship between input variables and investment outcomes.
3. Evaluate the performance of the recommendation system using appropriate metrics such as accuracy, precision, recall, or F1-score.

Implementation:

1. Implement the recommendation system using a programming language of your choice (e.g., Python).
2. Ensure the system is user-friendly and can accept input data for prediction.

Testing and Validation:

1. Test the recommendation system with new data samples to validate its accuracy and effectiveness.
2. Fine-tune the system if necessary based on testing results.

Documentation and Presentation:

1. Document the process of building the recommendation system, including data preprocessing, model selection, and evaluation.
2. Prepare a presentation summarizing your findings, methodology, and the recommendation system's performance.
3. ***Brownie score: If you can build a dashboard using PowerBI***

Conclusion:

Based on your analysis and the recommendation system's results, provide insights and recommendations for making better investment decisions. Discuss potential areas for improvement and future research.