Approach

In developing the Financial Insights Dashboard, we aimed to create a comprehensive tool that helps families understand their financial health better. The approach consisted of several key steps:

1. **Data Exploration**: We started by diving into the dataset, which contains detailed financial records for various families. This included transaction data such as income, expenses, savings, loan payments, credit card spending, and progress towards financial goals. By analyzing this data, we sought to uncover spending patterns at both the family and individual member levels.
2. **Identifying Patterns**: Through various analytical techniques, we identified trends in spending across different categories—like groceries, travel, and healthcare. We also examined how these expenditures correlate with income and savings, providing insights into overall financial behavior.
3. **Correlation Analysis**: To understand the relationships between different financial metrics, we created a correlation matrix. This helped us visualize how factors like income, expenses, and savings interact with each other, allowing us to pinpoint areas that significantly impact financial health.
4. **Building the Scoring Model**: The core of our analysis was the development of a scoring model designed to evaluate each family's financial health on a scale from 0 to 100. This model translates complex financial data into an easily understandable score.

Scoring Method

The scoring model is based on several key factors that reflect a family's financial situation:

* **Savings-to-Income Ratio**: This ratio measures how much of a family's income is saved. A higher ratio indicates better financial prudence and positively impacts the score.
* **Monthly Expenses as a Percentage of Income**: This metric assesses how much of the family's income is consumed by monthly expenses. Lower percentages are favorable and contribute positively to the score.
* **Loan Payments as a Percentage of Income**: This ratio evaluates the burden of loan repayments relative to income. Families with lower ratios receive higher scores since they are less financially strained.
* **Credit Card Spending Trends**: By analyzing trends in credit card spending, we can gauge spending habits. Excessive credit card use negatively affects the score.
* **Spending Category Distribution**: We looked at how spending is distributed across various categories. High expenditures in discretionary areas (like entertainment or travel) can lower the score, while essential spending tends to be more acceptable.
* **Financial Goals Met (%)**: This metric reflects how well families are achieving their financial objectives. A higher percentage indicates better goal attainment and contributes positively to the score.

Each factor is weighted according to its importance in determining overall financial health. The base score starts at 100 and is adjusted based on these weighted factors, ensuring that families receive a fair assessment of their financial well-being.