# Statistical Analysis Reports for Personal Expense Tracker

1. **Average Monthly Spending**
   * **Calculation**: Computes the average of all monthly expenses, providing a baseline for typical monthly expenditures.
   * **Insight**: Helps users gauge normal spending levels, enabling them to detect outliers or anomalies.
2. **Spending Variance and Standard Deviation**
   * **Calculation**: Measures the variability in monthly spending, indicating how consistent (or erratic) the user's expenses are.
   * **Insight**: High variance suggests fluctuating spending habits, prompting users to aim for more balanced budgets.
3. **Category-Wise Spending Proportions**
   * **Calculation**: Analyzes the proportion of total expenses attributed to each category (e.g., Food, Transport, Entertainment).
   * **Insight**: Allows users to understand which categories dominate their expenses, aiding in prioritizing budgeting efforts.
4. **Peak and Low Spending Periods**
   * **Calculation**: Identifies the months with the highest and lowest expenditures across categories.
   * **Insight**: Helps users anticipate seasonal expenses and adjust their budgets for high and low spending periods.
5. **Future Enhancements in Statistical Analysis**
   * **Objective**: Incorporate predictive models for estimating future spending based on statistical trends.
   * **Implementation**: As more data accumulates, using advanced statistical methods, like regression analysis, could provide more accurate forecasts.