Data visualization using Tableau

Dataset: Car purchase prediction

The dataset contains the following columns:

1. **User ID**: Unique identifier for each user.
2. **Gender**: The gender of the user (Male/Female).
3. **Age**: The age of the user.
4. **AnnualSalary**: The annual salary of the user.
5. **Purchased**: A binary column indicating whether the user purchased a product (1 for Yes, 0 for No).

Insights You Can Generate in Tableau for given dataset

Using this dataset, you can generate several meaningful insights:

Demographic Analysis:

1. **Age Distribution**: Visualize the age distribution of users to understand the dominant age groups.
2. **Gender Distribution**: Create a pie chart or bar chart showing the proportion of Male vs. Female users.

Purchasing Behavior:

3. **Purchase Rate by Gender**: Analyze the purchase rates for Male and Female users to see if gender influences purchasing behavior.
4. **Purchase Rate by Age Group**: Group users into age ranges (e.g., 20-30, 31-40) and analyze purchase rates within each group.

Financial Insights:

5. **Income Distribution**: Visualize the distribution of annual salaries to understand the financial background of users.
6. **Income vs. Purchase Decision**: Plot a scatter or box plot to see how annual salary influences purchasing behavior.

Combination Insights:

7. **Gender, Age, and Income Interaction**: Create a heatmap or combined dashboard showing the interplay between gender, age group, and income concerning purchasing decisions.

8. **Clustering Potential Buyers**: Identify clusters of users with similar age, gender, and salary profiles who are more likely to purchase.

Predictive Insights:

9. **Potential Buyer Profiles**: Highlight the typical profile of users who purchased the product (e.g., age range, income range, etc.).
10. **Non-Purchasers Analysis**: Explore the characteristics of non-purchasers and devise strategies to convert them into buyers.