IPL Dashboard

Objective:
To create an interactive dashboard to visualize IPL team and player performance metrics, providing insights into the game.

Features:
1. **Top Batsmen and Bowlers**: Visualizations of top performers in IPL.
2. **Team Standings**: Display of team rankings and points.
3. **Player Performance**: Analysis of player metrics, such as runs scored and strike rate.

Skills:
1. **Data Visualization**: Creating interactive and informative visualizations.
2. **Data Analysis**: Working with datasets to extract meaningful insights.
3. **Dashboard Development**: Designing and building interactive dashboards.

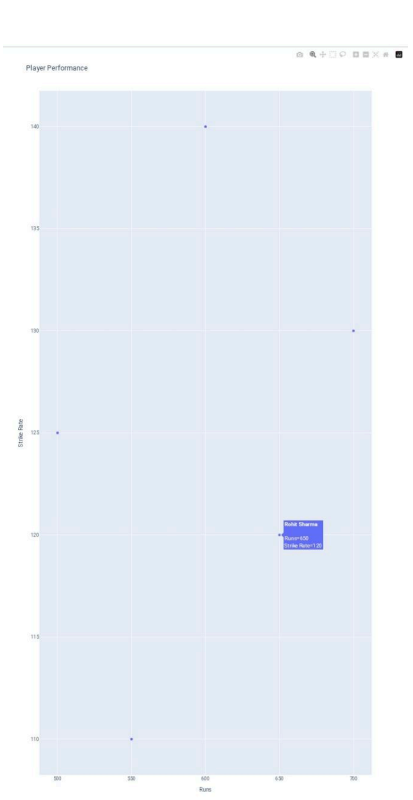
Tools and Technologies:
1. **Plotly**: Used for creating interactive visualizations.
2. **Pandas**: Utilized for data manipulation and analysis.
3. **Python**: Programming language used for development.

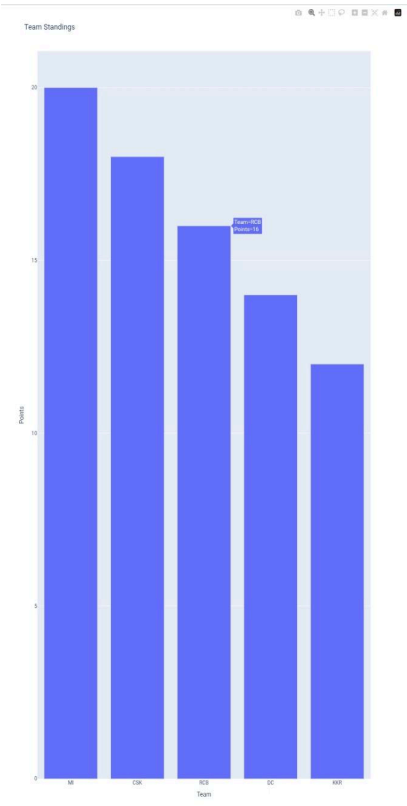
An interactive dashboard is created and has four separate interactive plots where
Anyone can zoom in and out ,hover over the plots to see the data points and pan across the plot

```
import plotly.express as px
import pandas as pd

# Sample dataset for top batsmen
batsmen_data = {
    'Player': ['Virat Kohli', 'Rohit Sharma', 'Suryakumar Yadav', 'KL Rahul', 'Shubman Gill'],
    'Runs': [700, 650, 600, 550, 500],
    'Strike Rate': [130, 120, 140, 110, 125]
}

# Sample dataset for top bowlers
bowlers_data = {
    'Player': ['Jasprit Bumrah', 'Mohammed Shami', 'Yuzvendra Chahal', 'Ravichandran
Ashwin', 'Kuldeep Yadav'],
    'Wickets': [25, 20, 18, 15, 12]
}

# Sample dataset for team standings
team_data = {
    'Team': ['MI', 'CSK', 'RCB', 'DC', 'KKR'],
    'Points': [20, 18, 16, 14, 12]
}
```

```
# Create DataFrames
batsmen_df = pd.DataFrame(batsmen_data)
bowlers_df = pd.DataFrame(bowlers_data)
team_df = pd.DataFrame(team_data)

# Create figures
fig_batsmen = px.bar(batsmen_df, x='Player', y='Runs', title='Top Batsmen by Runs')
fig_bowlers = px.bar(bowlers_df, x='Player', y='Wickets', title='Top Bowlers by Wickets')
fig_team = px.bar(team_df, x='Team', y='Points', title='Team Standings')
fig_performance = px.scatter(batsmen_df, x='Runs', y='Strike Rate', hover_name='Player',
title='Player Performance')

# Show figures
fig_batsmen.show()
fig_bowlers.show()
fig_team.show()
fig_performance.show()
```

Output





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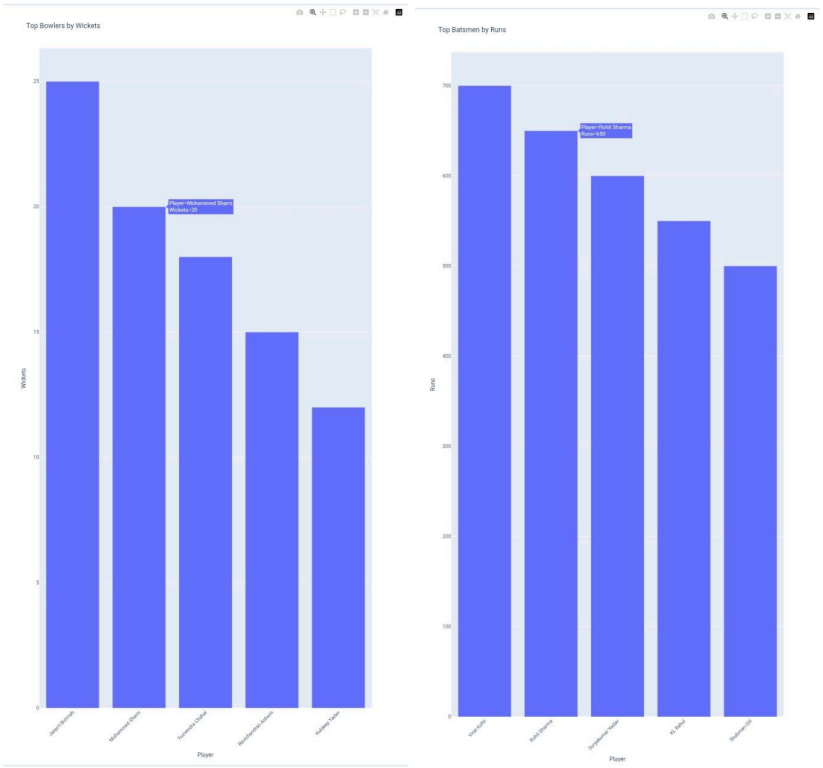

Now a dashboard which combines all these four together

```
import plotly.express as px
import plotly.subplots as sp
import pandas as pd

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    'Runs': [700, 650, 600, 550, 500],
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# Create DataFrames
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bowlers_df = pd.DataFrame(pd.DataFrame(bowlers_data))
team_df = pd.DataFrame(team_data)

# Create figures
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fig_bowlers = px.bar(bowlers_df, x='Player', y='Wickets', title='Top Bowlers by Wickets')
fig_team = px.bar(team_df, x='Team', y='Points', title='Team Standings')
fig_performance = px.scatter(batsmen_df, x='Runs', y='Strike Rate', hover_name='Player',
title='Player Performance')

# Create dashboard
fig_dashboard = sp.make_subplots(rows=2, cols=2, subplot_titles=['Top Batsmen', 'Top
Bowlers', 'Team Standings', 'Player Performance'])

fig_dashboard.add_trace(fig_batsmen.data[0], row=1, col=1)
fig_dashboard.add_trace(fig_bowlers.data[0], row=1, col=2)
fig_dashboard.add_trace(fig_team.data[0], row=2, col=1)
fig_dashboard.add_trace(fig_performance.data[0], row=2, col=2)

fig_dashboard.update_layout(height=800, width=1200, title_text="IPL Dashboard")

# Show dashboard
fig_dashboard.show()
```

Output

Outcomes:

1. **Insights into IPL Performance**: The dashboard provides a platform for users to explore team and player performance metrics.
2. **Interactive Visualizations**: Users can interact with the dashboard to gain deeper insights into the game.
3. **Data-Driven Decision Making**: The dashboard enables users to make informed decisions based on data-driven insights.