

## SESSION PLAN 5

### Session Name

Data Wrangling with Pandas

### Learning Outcomes

- Loading data into Pandas dataframe.
- Perform common data manipulation tasks
- Use functions such as groupby, merge, and pivot tables effectively.

### Prerequisites for the Student

- Data Wrangling with Pandas

### Student Activities

- Create a dictionary of the data given below and save it as ipl\_data.
  - [Import Pandas Library](#)
  - [{'Team': \['Riders', 'Riders', 'Devils', 'Devils', 'Kings', 'kings', 'Kings', 'Kings', 'Riders', 'Royals', 'Royals', 'Riders'\], 'Rank': \[1, 2, 2, 3, 3, 4, 1, 1, 2, 4, 1, 2\], 'Year': \[2014, 2015, 2014, 2015, 2014, 2015, 2016, 2017, 2016, 2014, 2015, 2017\], 'Points': \[876, 789, 863, 673, 741, 812, 756, 788, 694, 701, 804, 690\]}](#)
  - [Convert dictionary into DataFrame and save it in df.](#)
  - [Apply groupby on year and save it as grouped.](#)
  - [Print 2014 data by using get\\_group on grouped](#)
- Overview of Data Wrangling with Pandas
  - Conditional Filtering
  - GroupBy
  - Pivot table
  - Concat, Merge and Join
- Practice problems on Conditional Filtering, GroupBy, Pivot table, Concat, Merge and Join,
  - Refer the GitHub repo for problems
- Quiz on Data Wrangling with Pandas.
- Questions and Discussion on doubts - AMA

### Next Session

- Concept - Visualize data using Matplotlib (15 mins)
- Key topics to be highlighted - highlight where they would need to spend more time and importance w.r.t Data Science.
  - Terminologies in matplotlib
  - Different types of plots
  - Plot customizations
  - Visualization with Pandas