# The CFA Club

# Data Science Analytics Division Induction Problem Statement

## Problem Statement

Here you are provided with a [dataset](dataset) for all the IPL auctions held throughout the years. As a data analyst you must be able to extract information from the provided dataset, visualize it and apply machine learning methods to infer the trends and possible patterns that you might find.

This is the most basic, important and core concept of data science called [exploratory data analysis(EDA)](exploratory). Perform the following operations on the given dataset and prepare a detailed report about the analysis and inferences you take from that data, as well as the various kinds of tools you have used.
You need to focus on cleaning, manipulating,visualizing the data as well as applying statistical and machine learning models.

**1. Data Cleaning:** Use various Python libraries to clean and process the data.

**2. Data Manipulation:** Using various techniques to shape the dataset for data analysis and visualization.

**3. Data Visualization:** Display the data using plots and graphs using different libraries or softwares present.

**4. Machine Learning:** Find out how you can use machine learning techniques on this dataset, be it classification, regression or time series prediction. Get creative! Compile all your operations and prepare a report based on it.

## Rules:

● Your report should consist of the above 4 sections,explaining the tools you have used it in performing those operations.
● For visualization add screenshots of graphs/charts produced.
● Add your inferences and analysis of data as you process the data.

● Submit a shareable link for your Colab Notebook, containing the code you used for these tasks. Set view access to 'Everyone' while generating the shareable link.

## Submission format

Submit the following documents to the google form:
● Report in the form of a PDF not exceeding 10 pages.
● Google Colab links to the relevant code.

**Deadline**

The deadline for Submission is 25th January 2025,EOD.