



Exclusive Mentored Learning  
Session Experience

# DECODING CRICKET TEAMS' STRATEGIES USING PYTHON FOR DATA SCIENCE.



## MS. ANJANA AGRAWAL

Overall Ratings.....4.8+

Engagement Hours.....550+

Learners Impacted.....2700+

Ms. Anjana Agrawal comes with a diversified career spanning over 30 years as a Business Leader, Strategist, Management Consultant, Program Director and what not. She has led large and complex transformational programs delivering strong business outcomes for multiple clients across geographies leveraging Data, Technology, Descriptive & Predictive Analytics. Ms. Anjana has served and led key positions in organizations like Max Bupa health insurance, United Health group, IBM and NIIT. Currently, she is leading the industry by example as an Entrepreneur and Business Evangelist where she aims at providing key business solutions to clients across the globe.

# IN THIS SESSION, YOU WILL:



Learn how to master Data Science without quitting your job.



Know about the guidance you will get on your learning journey.



Understand how Data Science can solve business problems.



Chart your Data Science career path with Great Learning.



**LET US  
UNDERSTAND  
ABOUT PGP-DSBA**

# WHY DATA SCIENCE?



137,630 data science job openings in India:

*Analytics Insight*



The data analytics market is expected to grow up to US\$18.9 Billion in India:

*Analytics Insight*



Rise of data science will create 11.5 million jobs by 2026:

*U.S. Bureau of Labor Statistics*



**LET US UNDERSTAND  
HOW BUSINESS  
PROBLEMS ARE  
SOLVED USING  
DATA SCIENCE**

# LEARNING OBJECTIVES FOR TODAY

- Understand how to analyze dirty data
- Exploratory Data Analysis
- Application of statistical and visualization libraries
- The art of generating stories out of data

*"Let's make this session interactive, while we solve the business problem, think in parallel how you can solve business problems around you".*

# PROBLEM STATEMENT

Ever since its inception, Cricket has developed manifolds. The world has seen many variants of the game, test cricket to begin with, then one day internationals and recently T-20 cricket. Due to the shorter format, T-20 cricket has been adopted by many cricket leagues around the world, IPL being the biggest of them.

The Indian Premier League is a professional Twenty20 cricket league in India usually contested between March and May of every year by eight teams representing eight different cities or states in India. Cricketers are accompanied by a team of coaches, support staff and data scientists as well. These data scientists work upon the large chunks of data generated every match and inform coaches, captains and team management about the meaningful insights.

Let's assume, you are one of the data scientists associated with the Chennai Super Kings team. Your job in today's session is to derive those meaningful insights from the IPL data and provide actionable insights to the players and coaches so that they can perform well in the upcoming season.



# POINTS THAT CAN BE TAKEN INTO CONSIDERATION FROM CSK POINT OF VIEW:

## 1. Impact of toss on their win percentage:

Our data says if CSK wins the toss, then chance of winning the match is more than 33%. (Out of total 89 matches, CSK won 48 tosses, and out of these matches CSK won 30 matches)

## 2. Impact of cities on their win percentage:

CSK has a record of winning matches when the city of the match is the home ground/ city i.e. Chennai. As per data out of 34 matches played in Chennai CSK has won 26 matches i.e. 76% which is the maximum as compared to other cities.

## 3. Most impactful player of CSK against each team (man of the match):

On an avg. MS Dhoni is the most impactful player against any team. Let's talk about impactful player against individual teams on the basis of man of the match from the past records:





**Vs Deccan Chargers:** Though there is a tie between Dhoni, Bollinger, Morkel, Jadeja, and Raina, as all of them have been awarded man of the match once. But in terms of winning by Runs, MS Dhoni is the clear winner for CSK against DC.

**Vs Kings XI Punjab:** There are seven players who holds the record of being man of match in the seven matches. But, if we consider BB. McCullum, the match at which he was the MoM, CSK won by 97 runs being the highest against Kings XI.

**Vs Kochi Tuskers Kerala:** Wriddhiman P Saha.

**Vs KKR:** There are five players who have been awarded as man of the match in the five matches. But, if we consider MS Dhoni, the match where he won the MOM, CSK won by 55 runs being the highest run margin against KKR.

**Vs MI:** Suresh Raina (2 MOM against MI).



**Vs Pune Warriors India:** There are three CSK players who won man of the match award against them. But, if we consider MS Dhoni, the match where he won the MOM, CSK won by 37 runs being the highest run margin against PWI.

**Vs RR:** There are 2 CSK players i.e. Ravindra Jadeja and Murali Vijay winning 2-2 man of the match award. But, if we consider Murali Vijay, the match where he won the MOM, CSK won by 86 runs being the highest run margin

**Vs RCB:** Suresh Raina (Twice).

**Vs SRH:** There are three CSK players who won man of the match award against them. But, if we consider Suresh Raina, the match where he won the MOM, CSK won by 77 runs being the highest run margin against SRH.



#### 4. The top most (3) difficult teams to beat?

As per our analysis, CSK has lost a total of 38 matches. They have lost for the most number of times (7 times) against MI and KKR, followed by RR (5 times).

#### 5. Impact of toss on their win percentage against the 3 most difficult teams to beat:

##### If playing against MI:

Out of the 12 times CSK has played against MI, they have won the toss 5 times, 3 out of 5 times they chose to bat first, they won. Hence, CSK should choose to bat first if they win a toss against MI.

##### If playing against KKR:

When KKR wins the toss, they have a bigger chance of winning as per the data.

KKR has won the toss 5 times and out of these 5 matches, they won 3 matches.

Whereas, CSK won toss seven times and won 3 matches only.

##### If playing against RR:

When CSK wins the toss, then chances of losing the match increase as CSK has won toss 5/12 times and out of these 5 times, CSK has lost the match 3 times.



#### 4. If they win the toss, what should they opt for (bat/bowl) against each team, considering their toss decision - win ratio!!

Suggestions for CSK for on opting bat/ field against each team:

**Vs Deccan Chargers:** CSK should choose to BAT (4 times CSK has won the match by choosing to BAT, out of 5 toss wins)

**Vs Delhi Daredevils:** CSK should choose to BAT (4 times CSK has won the match by choosing to BAT, out of 7 toss wins)

**Vs Kings XI Punjab:** CSK should choose to BAT (6 times CSK has won the match by choosing to BAT, out of 7 toss wins)

**Vs Kolkata Knight Riders:** CSK should choose to FIELD (4 times CSK has lost by choosing to BAT, out of 7 toss wins).



**Vs Mumbai Indians:** CSK should choose to BAT (3 times CSK has won the match by choosing to BAT, out of 5 toss wins)

**Vs RR:** CSK should choose to FIELD (3 times CSK has lost the match by choosing to BAT, out of 5 toss wins)

**Vs RCB:** CSK should choose to BAT (5 times CSK has won the match by choosing to BAT, out of 7 toss wins)





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ABOUT PGP-DSBA

# PROGRAM STRUCTURE

## Foundation Building

Python for  
Data Science

Statistical  
Methods

### Analytics Techniques

#### Advanced Statistics

- Linear Regression
- ANOVA
- Factor Analysis
- Principal Component Analysis

#### Data Mining

- Supervised learning
- Unsupervised learning
- Decision Trees
- Discriminant Analysis

#### Predictive Modeling

- Multiple Linear Regression
- Logistic Regression
- Neural Network
- Model Comparison

#### Time Series Forecasting

- Time series analysis
- Holt Winters
- ARMA

#### Machine Learning

- KNN & Naïve Bayes
- Lasso Vs Ridge Regression
- SMOTE
- Bagging/ Boosting
- Model Comparison

#### Data Visualization

- Dashboard Design
- Charts
- Reporting
- Visual Analytics best practices

### Domain Applications

Career  
Workshop

Marketing  
and Retail  
Analytics

Financial  
and Risk  
Analytics

SQL

Web and  
Social media  
Analytics

Industry  
Interaction  
Series

Capstone Project

Hackathon event

# THE GREAT LEARNING ADVANTAGE

**With you every step of the way:**

Mentorship	Completion Rates	Feedback	Live Webinar	Doubt Dealing
Every week	95%+	95%+ VS or S	UT Austin faculty takes live webinar every month	Level 1: Mentor
Same mentor stays with you through out	Learner centric approach	90% of the session is rated 4.5+	Sports analytics	Level 2: Peer Group
Mentor is a part of WhatsApp group along with 15 others	Dedicated program manager	Feedback taken after every session	Decision making under uncertainty	Level 3: Acad Ops team, Great Learning
Homogenous grouping to ensure seamless experience & networking				Level 4: Monthly round of up doubts



**ANY QUESTIONS?**



# THANK YOU