



**upGrad**  
**Raho Ambitious**



#LifeKoKaroLift

# SGC Coaching:

*Articulate your Journey | Activate Students' Vigour| Accelerate Mutual Growth*

*JumpStart to an engaging session with  
your group!*

*using these slides for reference*

Key Roles overview—(45 mins)

Know Career Roles

Skills and competencies needed



Relevant Use cases—(25 mins)

Guiding Towards Your Desired Outcome



Activity Time!—(20 mins)

Set Individual Objective to accomplish outcomes

Identify opportunities of contribution

## Introspection

*Where do you want to be?*

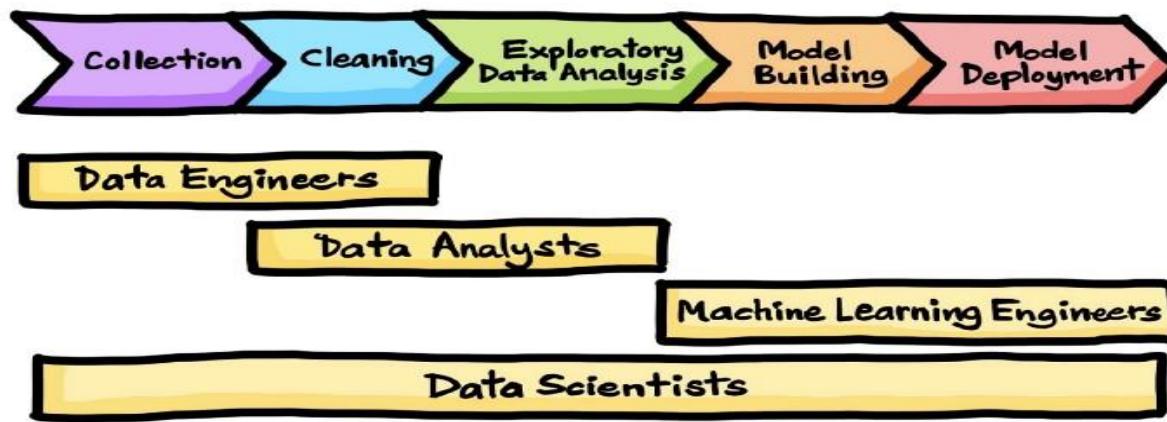
- Self-reflection on strength
- Topics of interest
- Key Aspiration

## Benchmarking

*Who inspire you in your network ?*

- Their achievement
- Prior background
- Top Skills

# THE DATA SCIENCE PROCESS



# DATA ENGINEER

## ROLE

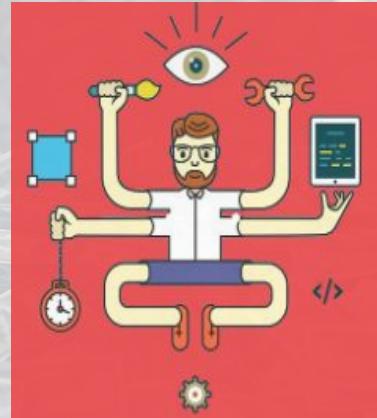


Data Engineers are the one's who will ensure the required data pipelines are in place ensuring good quality of data and timely delivery of the data to everyone who needs to work with the data. Data Engineers work to prepare and make raw data more useful for analytical or operational uses

## SKILLS



Data Warehousing, Ability to write, analyze, and debug SQL queries, Experience in working with Big Data platforms like Hadoop, Spark, Kafka, Flume, Pig, Hive, etc. , Experience in handling data pipeline and workflow management tools like Azkaban, Luigi, Airflow, etc. , Experience in handling stream-processing systems such as Storm and Spark-Streaming, Strong Communication Skills



## CTC



The national average salary for a Data Engineer is ₹7,70,360 in India.



## LANGUAGES/TOOLS

SQL, Python, Hive, Pig, Java, C++, Hadoop, Spark, Kafka, Azkaban, Airflow, Luigi, AWS, GCP, Azure

# DATA/BI ANALYST

## ROLE



Data Analysts are responsible for collecting, processing and analysing the data to help the company find insights from it which helps in taking business decisions. BI Analysts are nothing but Data Analysts but more focussed on the visualization and reporting aspect of it.

## SKILLS



Programming skills in Python/R, Solid understanding of database management systems, Proficient SQL/HQL skills, Good data visualization skills and proficient with Tableau/PowerBI/QlikView, etc, basic understanding of predictive modelling



## CTC

The national average salary for a Data Analyst is ₹5,07,612 in India.



## LANGUAGES/TOOLS

SQL, Excel, Python/R, Tableau/PowerBI/QlikView, Basics of Big Data, Basics of Cloud

# ML ENGINEER

## ROLE



ML Engineers are mostly people from software engineering background who are responsible to take the data science use cases and make it deployable. They are also responsible for updating and maintaining the deployed ML models.

## SKILLS



Understanding of data structures, data modeling and software architecture. Deep knowledge of math, probability, statistics and algorithms. Ability to write robust code in Python, Java and R. Familiarity with machine learning frameworks (like Keras or PyTorch) and libraries (like scikit-learn)



## CTC



The national average salary for a Machine Learning Engineer is ₹7,68,375 in India.

## LANGUAGES/TOOLS



Python, Machine Learning Algorithms, DL/NLP, Java, DBMS, Cloud Architecture, Big Data Architectures, AWS/GCP/Azure

# DATA SCIENTIST

## ROLE



Data Scientists are people with non linear mindset and are expected to use predictive modelling or descriptive analytics to solve a business problem. They are expected to know how to extract data, find insights, visualize it, create models and if needed how to make the solution production ready. They are usually expected to be good with predictive modelling .

## SKILLS



Excellent programming skills in Python/R and its data science libraries( Pandas, Scikit Learn,etc),Experience with RDBMS and SQL, Good with data storytelling and visualization, Understanding of Big Data and Cloud systems, Good ML frameworks like Tensorflow,Caffe,etc



## CTC

The national average salary for a Data Scientist is ₹9,16,462 in India..



## LANGUAGES/TOOLS

Python/R, SQL, Tensorflow,Keras,Caffe,Big Data Tools, Cloud Architectures - AWS/GCP/Azure, Tableau/Qlikview/PowerBI

# BUSINESS ANALYST

## ROLE



Business Analysts are people who are responsible for liaising between business users and technologists to exchange information in a concise, logical and understandable way in coordination with the Technology team. This doesn't necessarily involve the use of data science skills but having data skills would likely make someone a more compelling candidate for almost any business.

## SKILLS



Domain understanding, Requirement Gathering, Requirement Elicitation, Process Excellence, Wireframing, Prototyping, User Acceptance Testing, Documentation Prowess, Basic Data Analysis Skills



## CTC

The national average salary for a Business Analyst is ₹6,00,000 in India.



## LANGUAGES/TOOLS

Excel, Visio, SQL, Tableau, Wireframing tools like Axure RP/Visio

## Data Analyst

### Responsibilities

- Curate the data
- Visualize and report data

### Tools

- Excel
- SQL
- Tableau

### Skills

- Analytics
- Communication & Visualization

### Business Facing

- Sometimes

### Salary

\$65,000



## Data Scientist

### Responsibilities

- Source data
- Analyze data
- Run experiments

### Tools

- Python
- R
- SQL

### Business Facing

- Yes

### Skills

- Analytics
- Communication
- Story-tell
- Model building
- Math
- Coding

### Salary

\$120,000



## Data Engineer

### Responsibilities

- Build data pipelines and warehouse
- Manage scalability of data products

### Tools

- Java
- C++
- Kubernetes
- Hadoop
- Spark
- Python

### Skills

- Coding
- Model implementation

### Business Facing

- Not Really

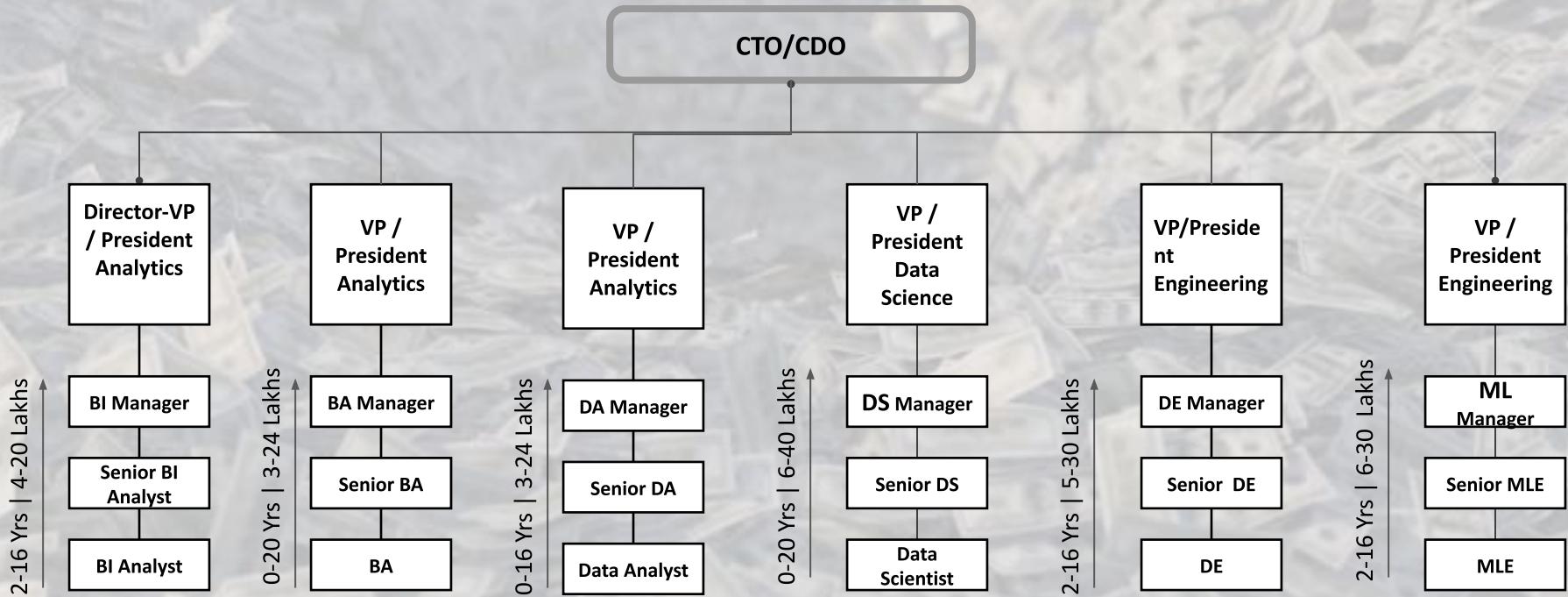
### Salary

\$110,000

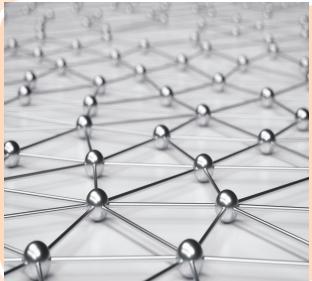


MathaMagicians

# ROLE HIERARCHY



# Competencies needed (Soft Skills)



## Data Engineer

- IT knowledge
- Process Centric
- Dealing with ambiguity

## Data Analyst/ BI Analyst

- Eye for Detail
- Process Centric
- Analytical mindset

## Business Analytics

- Business acumen
- Problem solving skills
- Stakeholder management

## ML Engineer/ Data Scientist

- Sharp Analytical skills
- Result orientation
- Research mindset

# How to switch your role successfully

Think of the steps mentioned below

Which role do you prefer to opt for? (Aspiration?)

Which factors have you considered while making this choice?

Do you have a similar opportunity in your org/ plan to switch to leverage your skills?

What is the current skill gap which bars you to play these roles already?

Which skills are most critical for you to stay relevant in chosen profiles across functions?

Applicable Use Case Examples:  
[Recommender-systems](#)  
[customer-support-on-twitter](#)  
[Data Science Applications](#)



From MA Economics fresher to Associate BI Consultant (Quantzig) Fresher



Ishan Savio  
Kerketta | DS C7

I had tried to do online courses before but could never complete them. I felt that online learning at upGrad was very engaging, with a platform to interact with other learners, dedicated student mentor and career support. I have been able to get a job in Quantzip as a fresher because of upGrad.



From Tableau Developer (Beyond Analytics) to Facilitator (Google)  
4 years work ex



Birupakshya | DS C7

I was on a maternity break and could bag a role of a facilitator at Google. This was possible because of upGrad's disciplined approach towards deadline and the kind of learning I received. I also got nominated for top 50 tech leader award at Intercon Dubai and got invited to Google women techmakers to speak on entrepreneurship.



From Associate Software Engineer (CGI Information technology) to Development and Testing Engineer (Hackerank)  
2 years work ex



Suryanidhi Dandala  
| DS C12

I am extremely thankful to the upGrad team for conducting the Hackerrank sessions. During technical & coding rounds I was asked to code in Python and was commended for the same. from that Python crash course and the content has helped me majorly to clear the interview rounds. Eventually I received a 54% hike in my next job.



From Associate Director (Cognizant) to Sr. Product Manager Data (UST Global)  
16+ years work ex



Anand Govindam | DS C3

I strongly believe if senior leaders intelligently pitch their newly acquired skill sets with their vast experience it is not difficult to transition to a new role.



From Software engineer (Harman Connected services) to Data Analyst (TCS))  
5+ years work ex



Mungara Dileep kumar Reddy| DS C7

I found upgrad to be the best in the Data Science course as it provided adequate knowledge to the candidates whereas other platforms just provide a brief. I got 33% hike in my new role and strongly believe that it was because of the program from upGrad.



From Data Scientist (Hashmap) to Data Scientist (Radamatic Solutions)  
9+ years of work ex



Maxim Rohit | DS C6

I am really happy with upGrad's course content. The way upGrad careers team has helped me in understanding the skills I needed to focus on was something I really liked. At Accelerate 3.0, I was able to realise that I needed to work on statistics, which in turn helped me to work on other interviews and also helped me crack a brilliant salary package.



# Activity Time!

*A Drop of Effort in right direction at the right time can bring transformation*

- i. Identify at least 2 profiles from LinkedIn where you aspire to fit in and can enhance your skills suitably. Check example of LinkedIn Search and Job Descriptions(JD) available on subsequent slides.
- ii. Which will be the top 3 expected skills necessary for the roles you are keen on? ( Example: database, coding in SQL, python)
- iii. Check the details of your preferred recruiters through LinkedIn or any other public source/ personal references
  - a. Domain, Unique positioning, products/services, roles and expected opportunities
- iv. Build your potential through proactive analysis on:
  - 2 areas of strength where you can start contributing NOW. eg: programming skills, domain knowledge
  - 2 areas where you need to pace further to showcase capabilities, e.g. statistical algorithms



# LinkedIn Job Search Example

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ML engineer in Mumbai, Maharashtra, India  
9 results

Job Alert Off



**Senior Product DevOps Engineer** Promoted

Fractal  
Mumbai, Maharashtra, India  
 178 connections work here  
1 week ago ·

**Data Centre Engineering Operations** Promoted

Amazon  
Mumbai, Maharashtra, India  
 12 connections work here  
2 weeks ago

**Lead AI Engineer** Promoted

Fractal  
Mumbai, Maharashtra, India  
 178 connections work here

**Senior Product DevOps Engineer** ...

Fractal · Mumbai, Maharashtra, India  
Posted 1 week ago · 333 views

Save Easy Apply

See how you compare to 68 applicants

Job	Company	Connections
<ul style="list-style-type: none"><li>0/7 skills match</li><li>68 applicants</li></ul>	<ul style="list-style-type: none"><li>1,001-5,000 employees</li><li>Management Consulting</li></ul>	178 connections 7 company alumni

Select your desired profile  
Select the location and company (Amazon/ Fractal)  
Check the options below  
Go through the JDs for preferred options.

- [Visualization use case- COVID](#)

## Sample Job Descriptions (JDs)

- [Data Analyst JD](#)
- [Business Analyst JD](#)
- [Data Engineer JD](#)
- [Data Scientist JD](#)