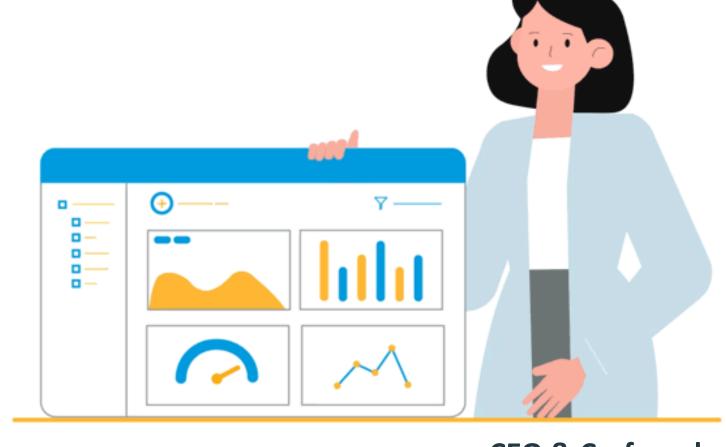
# BUILD YOUR CAREER IN THE GLAMOROUS JOB AREA OF THE CENTURY – BIG DATA AND DATA SCIENCE



**Hiren Kakkad** 

Delivered by

**CEO & Co-founder | Stat Modeller** 

www.statmodeller.com

# Let's have a look at what we will be discussing during this session

# Agenda

What we will be discussing during the session

1 Introduction to Big Data and Data Science

Application Areas

**Varieties of Roles** 

Prepare your Learning bucket to become Data Science Expert

Career Opportunities in India and Abroad

Q & A



INTRODUCTION TO BIG DATA AND DATA SCIENCE



# What is Big Data?

Data that is so large, fast or complex that it's difficult or impossible to process using traditional methods.





# How Big???

# 2021 This Is What Happens In An Internet Minute

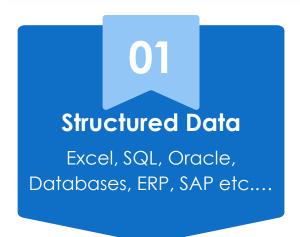


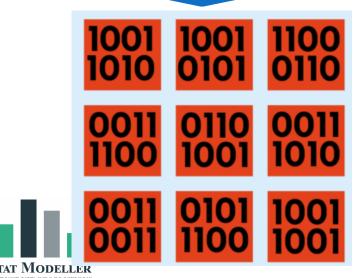
# Let's see how the world is changing?

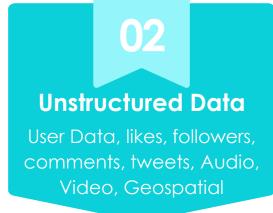




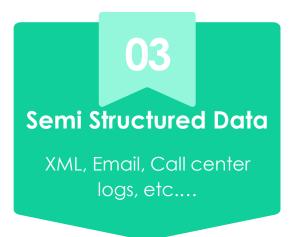
#### 3 Types of Data in Big Data













#### 3Vs of Big Data

- ☐ The act of accessing and storing large amounts of information for analytics has been around for a long time.
- But the concept of big data gained momentum in the early 2000s when industry analyst Doug Laney articulated the nowmainstream definition of big data as the three V's:

#### Volume

- Terabytes
- Records and Transactions
- Mobile Sensors

#### Velocity

- Batch Data
- Near Time
- Real Time
- Streaming

# BIG DATA

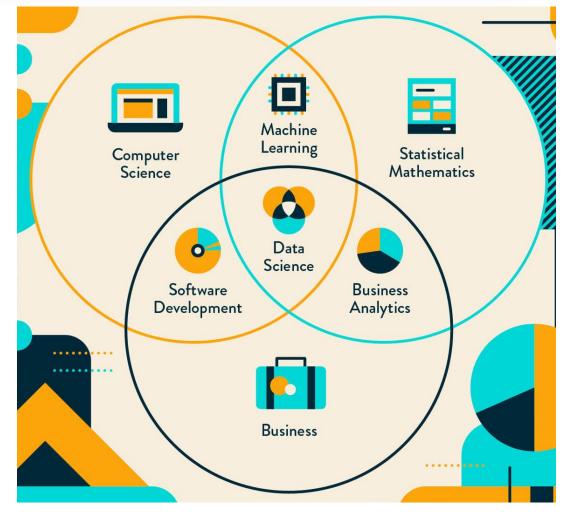
#### Variety

- Structure
- Unstructured
- Semi-structured
- All of the above

#### **Data Science**

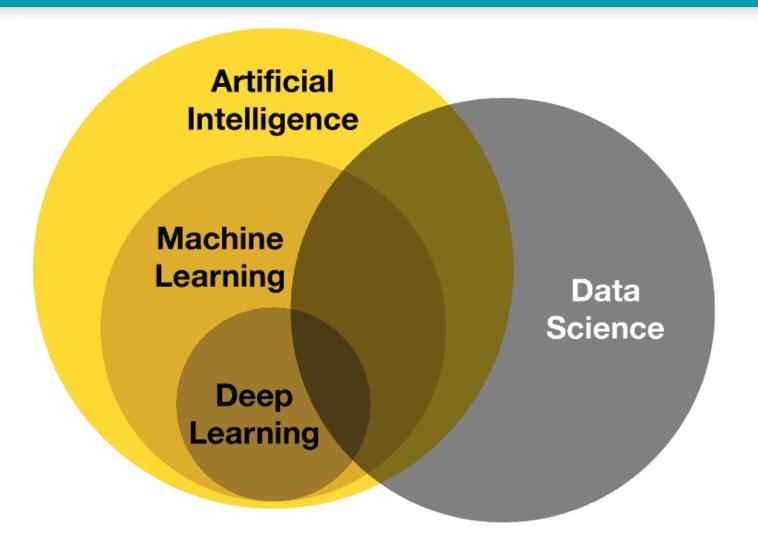
- ☐ Data science is really the fusion of three disciplines: computer science, math, and business.
- □ Today, our mobile devices generate more data than ever before, posing new challenges for storage and analysis. Exabytes (one million terabytes) of data are created every day.
- ☐ Gaining marketing insight from this ever-growing database in a timely manner is becoming increasingly difficult.

■This is where data science comes in.



Source: <a href="https://towardsdatascience.com/introduction-to-statistics-e9d72d818745">https://towardsdatascience.com/introduction-to-statistics-e9d72d818745</a>

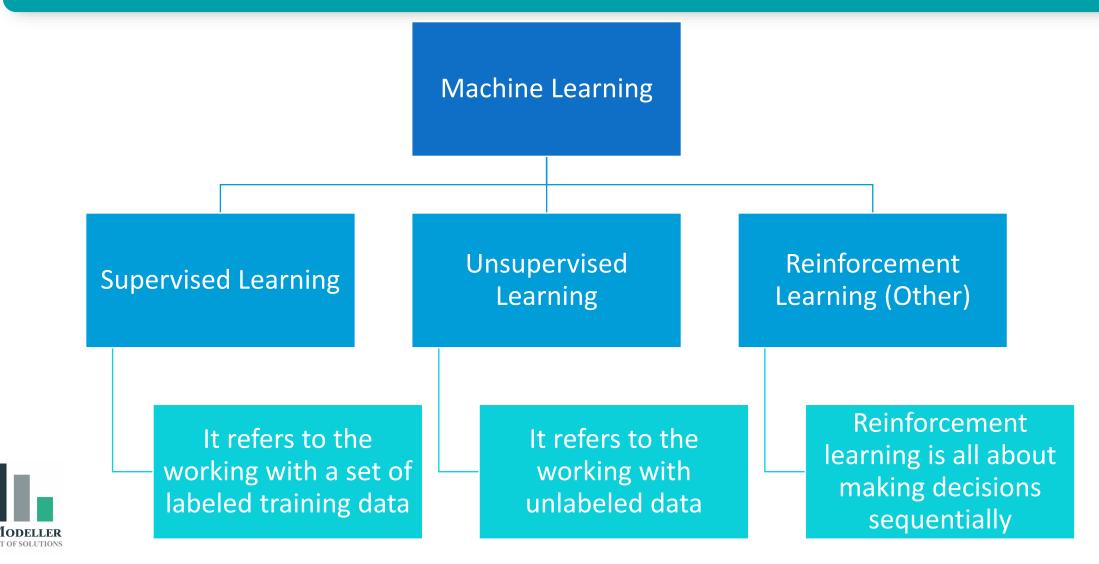
### Machine Learning – AI – Data Science





12

# Types of Machine Learning



### If Bollywood Movie presented by Analyst then...

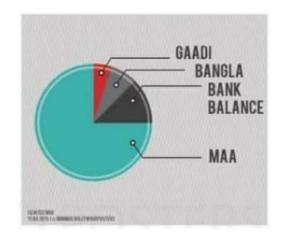
Baazigar



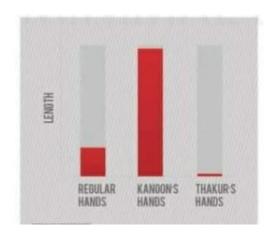
Amar Akbar Anthony



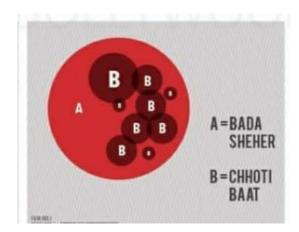
Deewar



Zanjeer



**DDLJ** 



Himmatwala





# Can I take 3-4 Minutes to introduce myself?

#### SHORT PROFILE

- CEO & Co-founder of Stat Modeller
- More than 10 years of industrial experience
- Awardee of the Training Quality Excellence Award by IQAC and ISTD
- Certified Trainer by NSDC & Skill India
- Certified by Google Analytics Academy for Data Studio
- Certified Lean Six Sigma Black Belt
- Trained 9000+ participants
- Guided 100+ Improvement projects
- Assisted 45+ Research Projects
- Trainer for in Data Analysis, R, Python, SPSS, Minitab, Power BI, Excel,
   Advanced Excel, Six Sigma, TPM, Kaizen, 5-S, Kanban etc.
- Life member of ISTD (Indian Society for Training and Development)





#### **APPLICATION AREAS**



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#### **Data Science Application Areas**



#### E-commerce

- Identifying Consumers
- Recommending Products
- Analyzing Reviews



#### Manufacturing

- Predicting potential problems
- Monitoring systems
- Automating MFG units
- Maintenance scheduling
- Anomaly Detection



#### **Banking**

- FraudDetection
- Credit Risk
   Modeling
- Customer Lifetime Value



#### Healthcare

- Medical Image Analysis
- Drug Discovery
- Bioinformatics
- Virtual Assistants



#### Transport

- Self Driving Cars
- Enhanced Driving Experience
- Car Monitoring System
- Enhancing the safety of passengers



#### Finance

- CustomerSegmentation
- Strategic decision making
- Algorithmic Trading
- Risk Analysis



#### **VARIETIES OF ROLES**



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#### Varieties of Roles

01

#### **Data Analyst**

Exp: 0-3 years

Role: what HAS happened?

Process Data, Provide Reports, Summarize and Visualize Data

**Tools:** Excel, Python, R, SQL, Power BI, Tableau etc....

02

#### **Business Analyst**

Exp: 3-7 years

Role: what HAS happened?

Process Data, Provide Reports, Summarize and Visualize Data + Connect with business scenarios

**Tools:** Excel, Python, R, SQL, Power BI, Tableau etc....

03

#### **ML Engineer**

**Exp:** 3-5 years

Role: what WILL happened?

Data pre-processing, Apply ML algorithms, Do Prediction

**Tools:** Python, R, SQL, Power BI, Tableau, Spark, TensorFlow, Keras, Haddop etc.... 04

#### **Data Scientist**

Exp: 5+ years

Role:

what WILL happened?

Data pre-processing, Apply ML algorithms, Do Prediction + Domain Knowledge

**Tools:** Python, R, SQL, Power BI, Tableau, Spark, TensorFlow, Keras, Haddop etc....



# PREPARE YOUR LEARNING BUCKET TO BECOME DATA SCIENCE EXPERT



#### Technologies used in Data Science and Data Analytics



























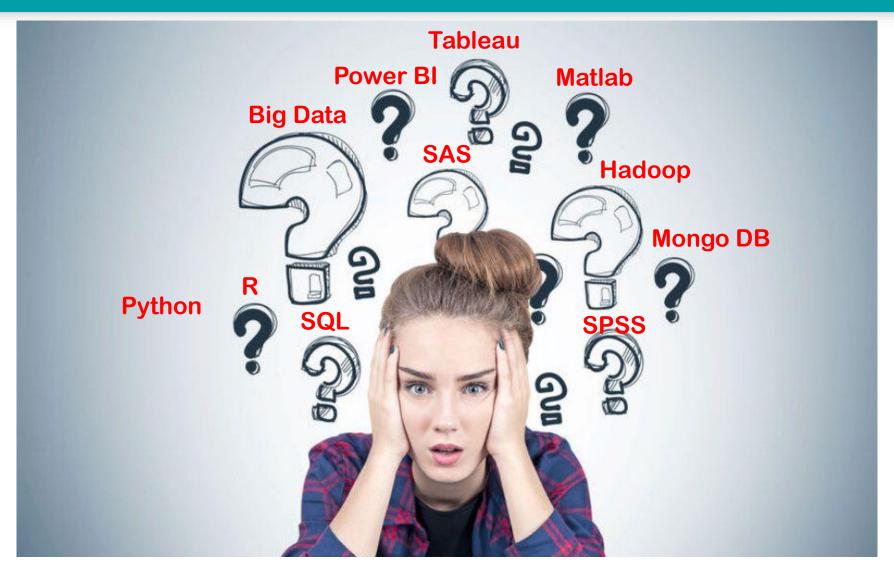






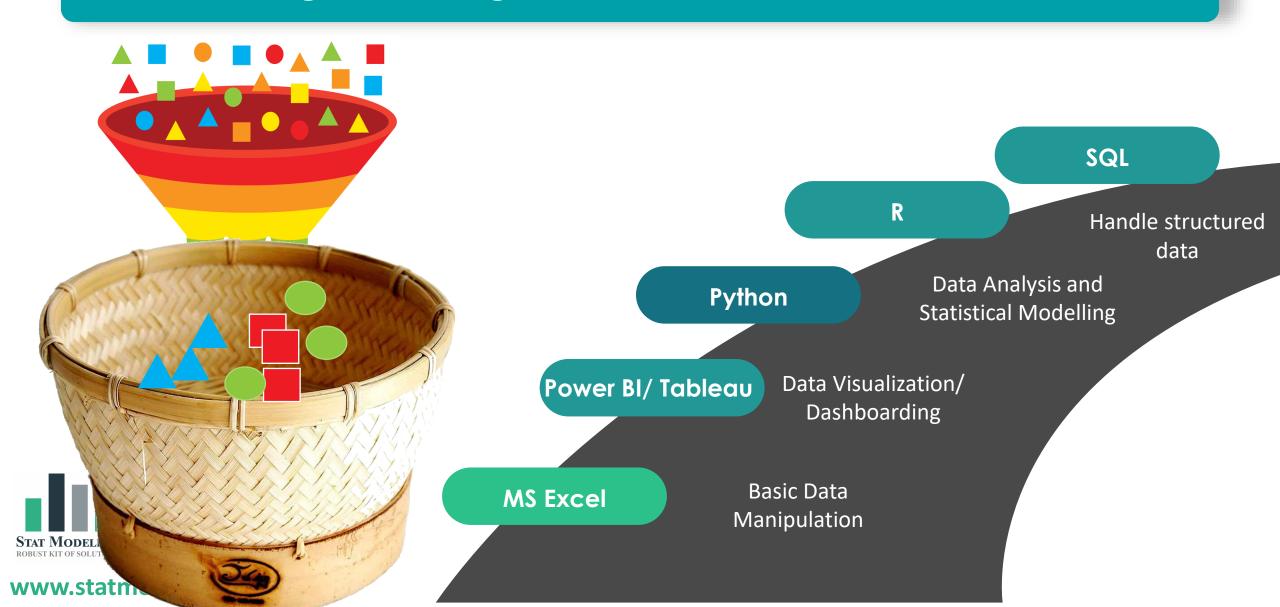
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#### Confused from Where to Start?





# Start Making a Learning Bucket

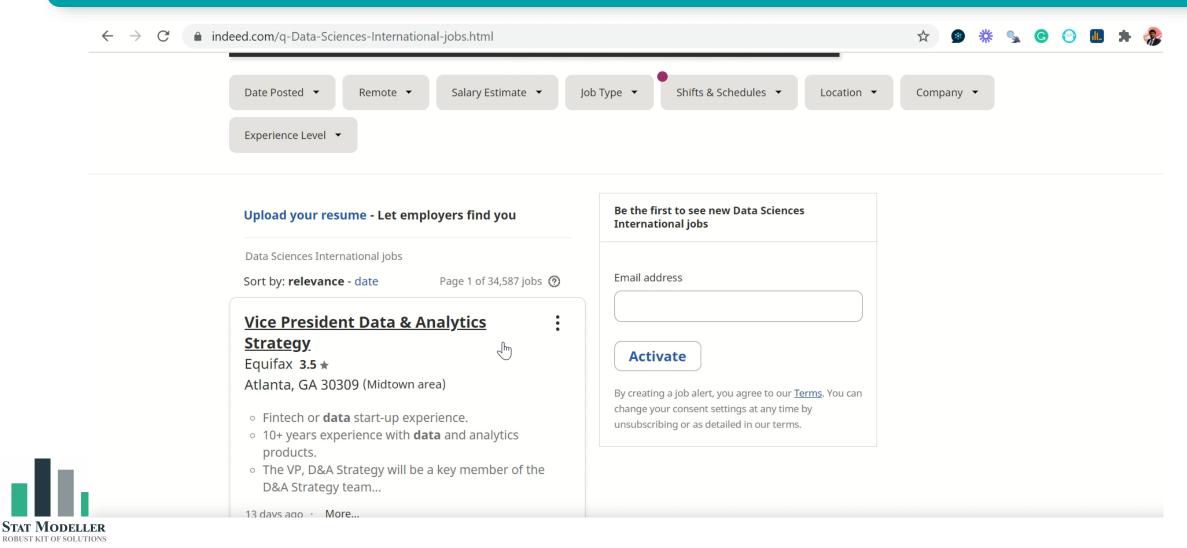


#### CAREER OPPORTUNITIES IN INDIA AND ABROAD

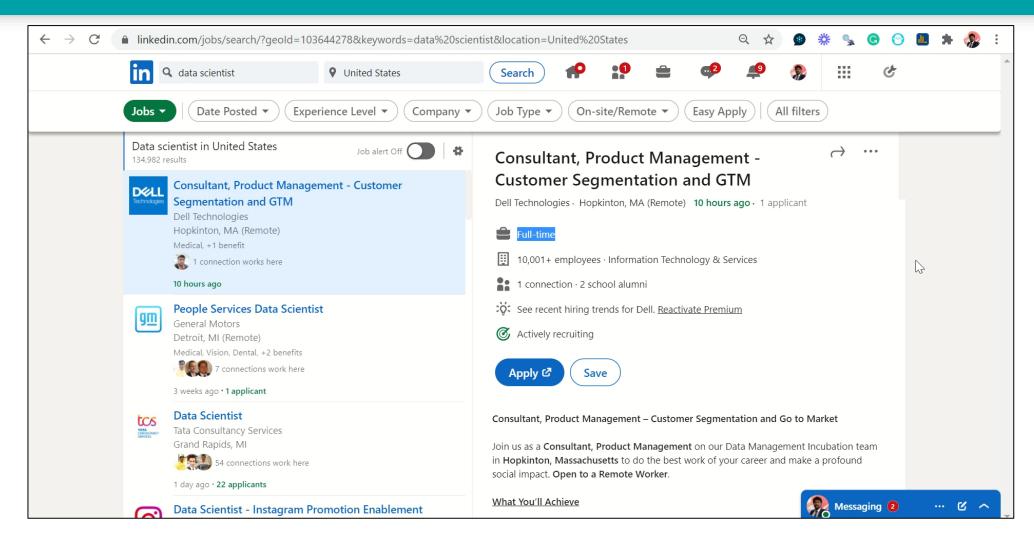


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#### Data Science Job Opportunities in Abroad

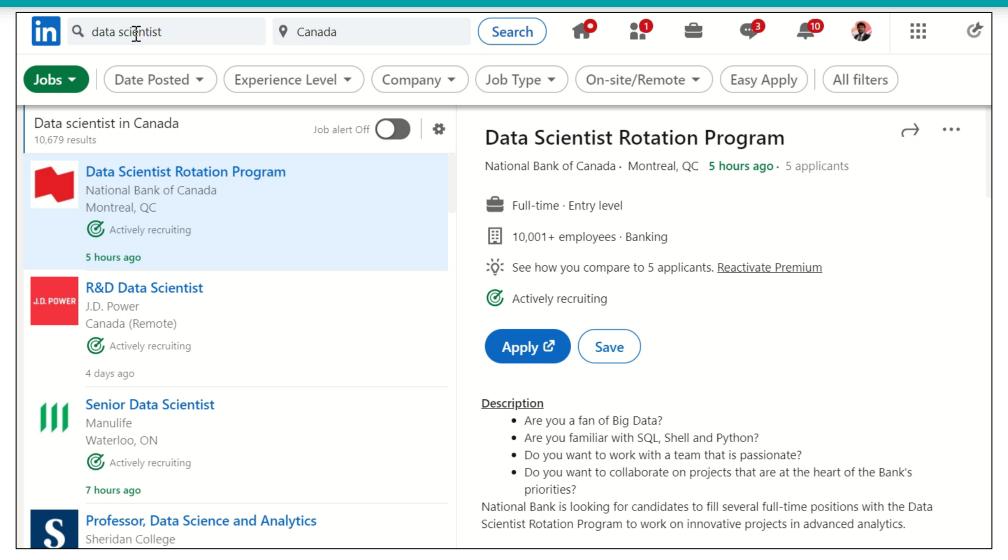


#### Data Science Job Opportunities in US - LinkedIn





#### Data Science Job Opportunities in Canada - LinkedIn





#### Analytics India Industry Study 2021

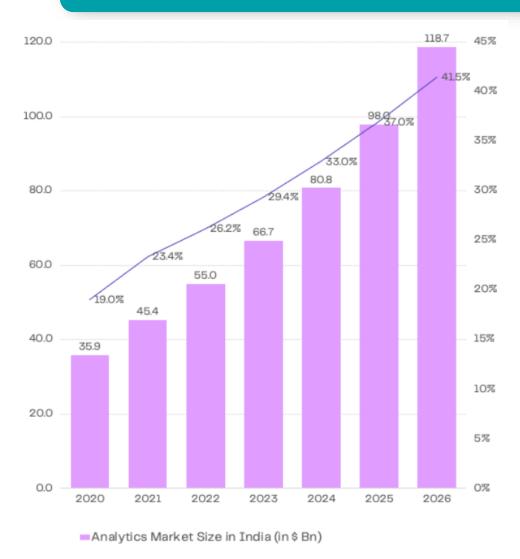
As covered in our reports regarding the development of the data science domain in India, it is evident that the analytics and data science function has experienced significant growth over the last year, despite the pandemic. The rising trend in <u>salaries</u> across almost all parameters, the maturing of the analytics market in terms of experienced hiring and salaries offered, the significance of gender diversity in the Indian analytics function, and the <u>\$836.3 Mn investment</u> in Indian AI and analytics start-ups in 2020, are self-explanatory in terms of the development and global standing of the Indian Analytics market.

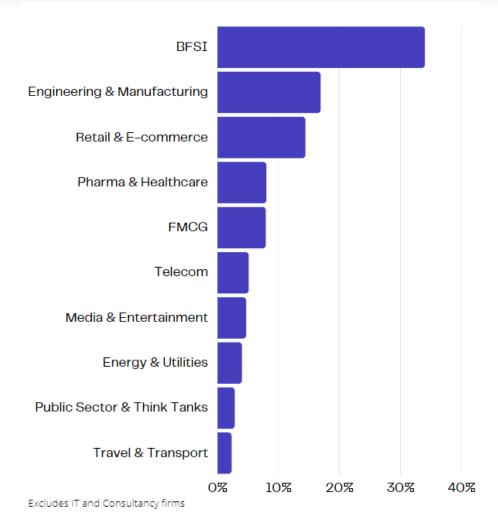
This development has facilitated the increase in the current market size of the Indian analytics industry to \$45.4 Bn. This signifies a growth of 26.5% in the market size y-o-y. Last year, the analytics function garnered \$35.9 Bn in size. The analytics function experienced growth across almost all companies, industry types, services rendered, and geographies.



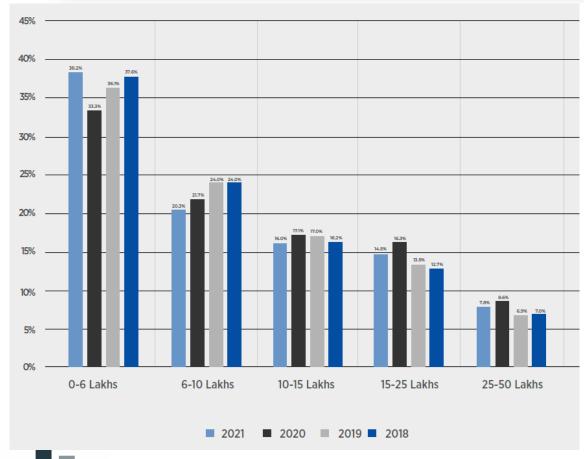
Source: <a href="https://analyticsindiamag.com/analytics-india-industry-study-2021/">https://analyticsindiamag.com/analytics-india-industry-study-2021/</a>

# Analytics India Market Projections (% Market Share)





#### Salary Distribution Across Various Brackets

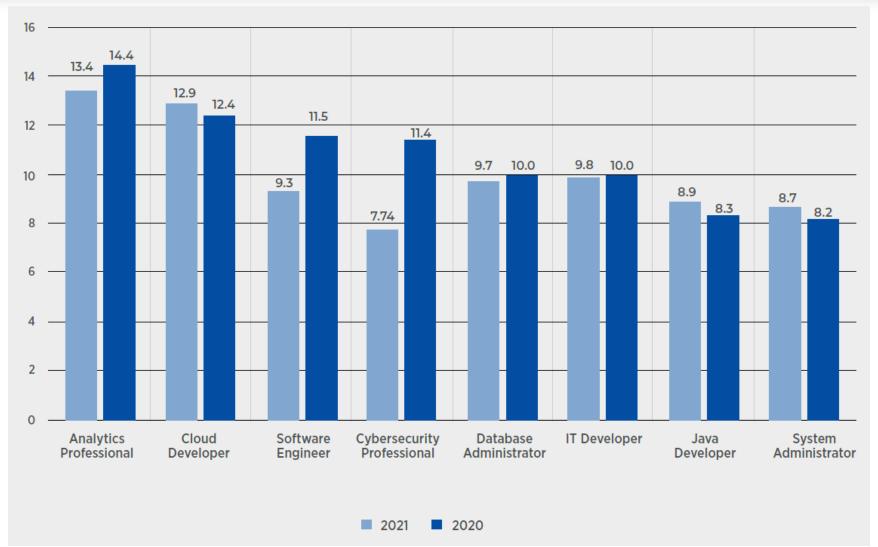


#### **Key Highlights**

- The median salary of analytics professionals in India in 2021 is INR 13.4 Lakhs a 6.9% decline over the 2020 median salary of INR 14.4 Lakhs. Much of the decrease in salary can be attributed to the pandemic. In spite of this, the median has remained above the 2019 median.
- The proportion of the analytics professionals remains the highest in the entry and middle-income levels (0-6 Lakhs 38.2% and 6-10 Lakhs 20.3%). The salary cuts led to an increase in the percentage of Analytics professionals in lower brackets.
- However, 41.5% of all the analytics professionals fall under the higher income level (greater than 10 Lakhs per annum). The percentage of analytics professionals with greater than 10 lakh salary was 45.6% in 2020, signifying a decrease in the percentage of professionals in the bracket

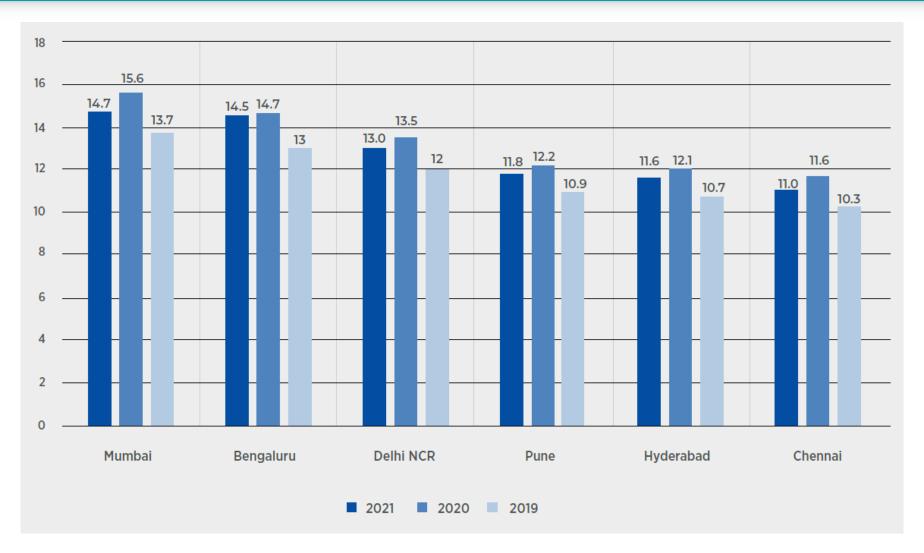
Source: <a href="https://analyticsindiamag.com/analytics-india-salary-study-2021-by-aim-analytixlabs/">https://analyticsindiamag.com/analytics-india-salary-study-2021-by-aim-analytixlabs/</a>

# Salaries in Analytics Compared to Other it Roles



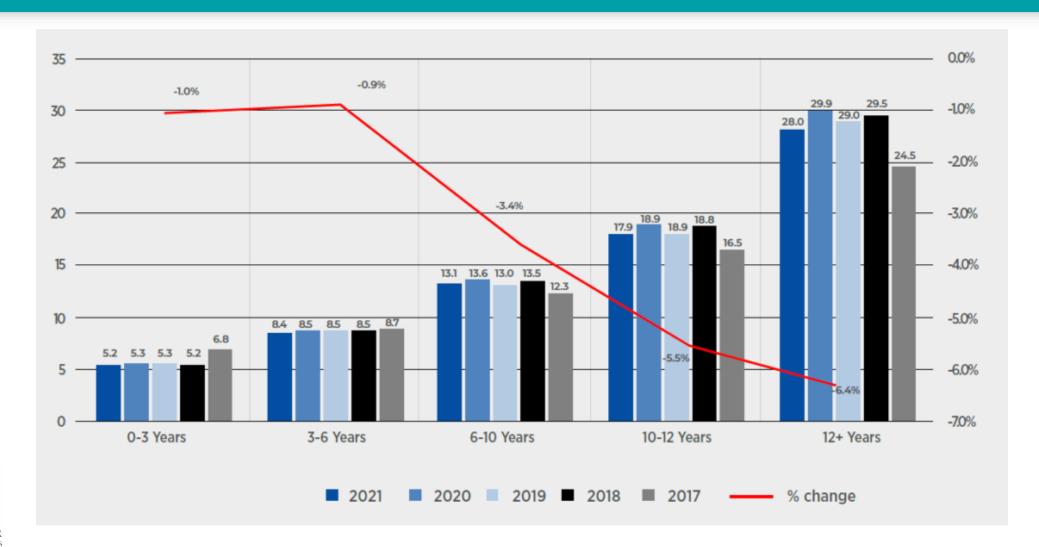


# Salary Trends Across Cities



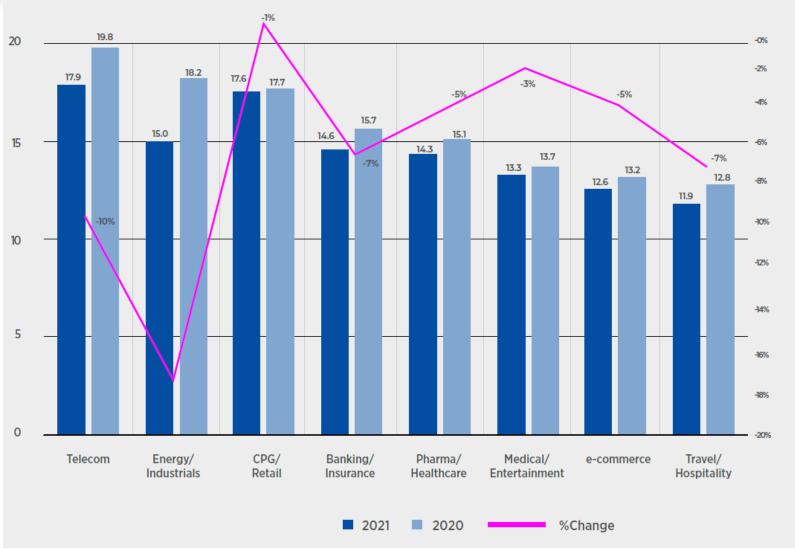


# Salaries Across Experience Levels



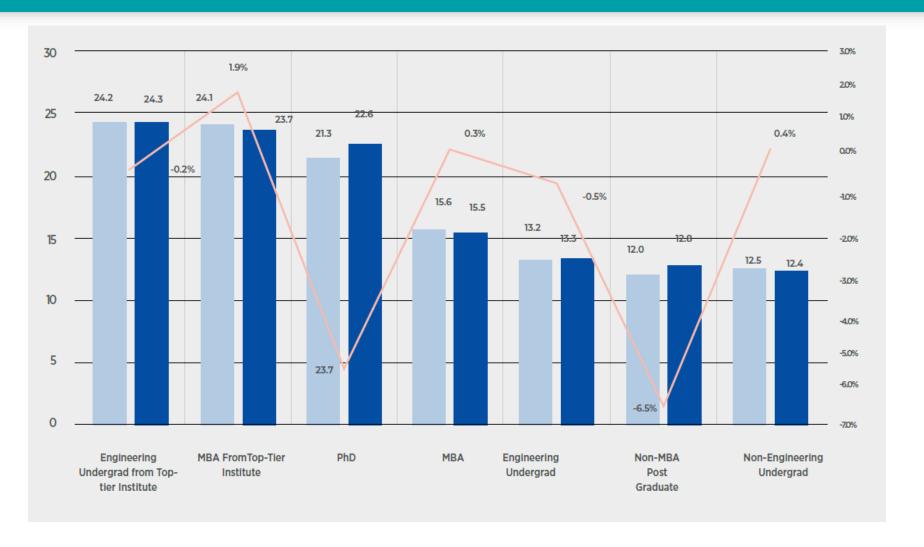


#### Salaries Across Industries



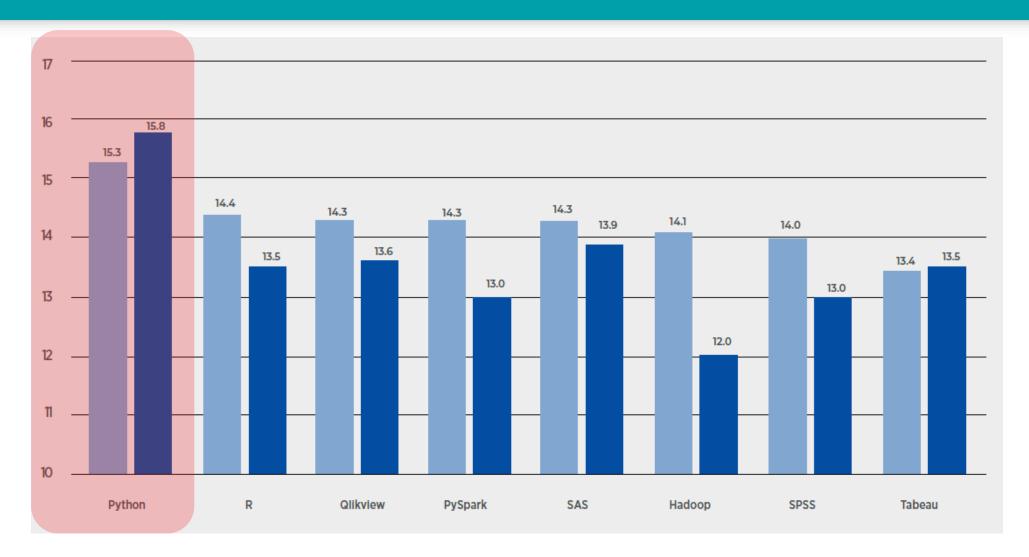


# Salaries by Education Qualifications

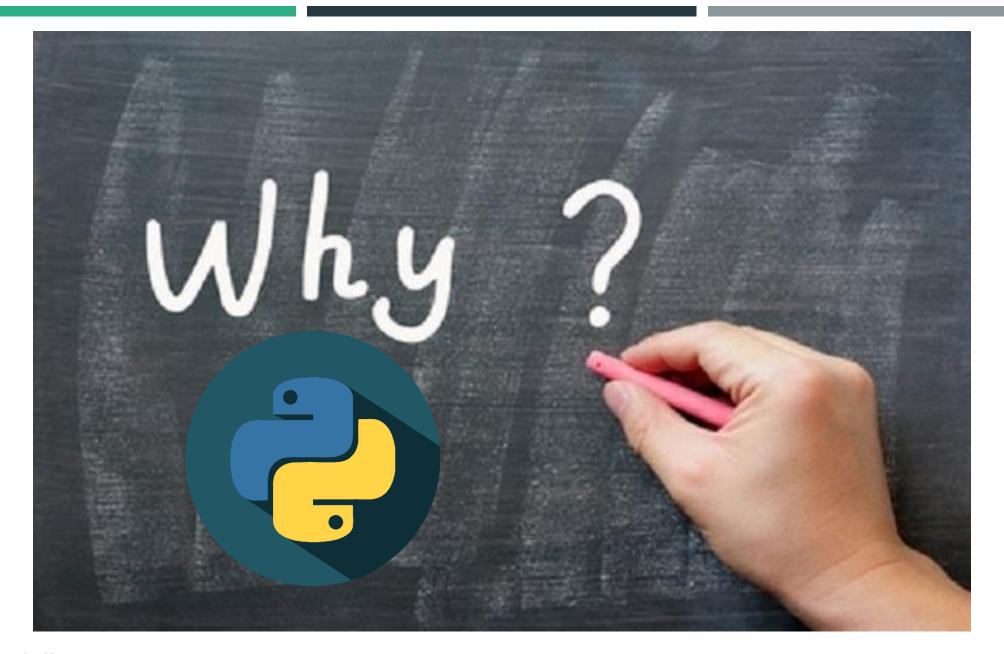




### Salaries by Tools









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### Let's Explore simplicity of Python

☐ How to write "Hello World" program

#### In C ++

```
#include <iostream>
using namespace std;

int main() {
  cout << "Hello World!";
  return 0;
}</pre>
```

### In Java

```
public class MyClass {
   public static void main(String[] args) {
      System.out.println("Hello World");
   }
}
```

### In Python

```
print("Hello World")
```

### In C#

```
using System;

namespace HelloWorld
{
   class Program
   {
     static void Main(string[] args)
        {
        Console.WriteLine("Hello World!");
     }
   }
}
```



### Why Python? 11 Reasons...

Its Popularity and High Salary

Open Source and Free

Very Easy Learn for Non-programmer

Huge Community
Support

Variety of IDEs (Pycharm, Jupyter, Spyder etc)

More than **2 Lacs**Packages Available for
Free

Attractive Packages for Graphical Analysis (Matplotlib, Plotly, Seaborn, ggplot) Highly effective packages for Machine Learning Algorithms

(Scikit Learn)



Used for Artificial Intelligence (Keras, Tensorflow, OpenCV)

Useful for Scripting and Automation

Cross Platform Compatibility

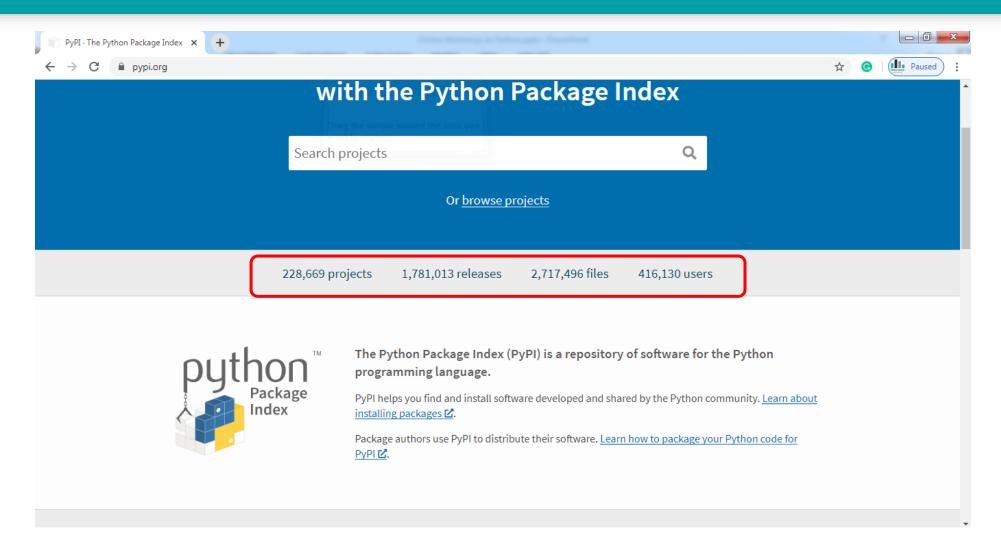
### Use of Python

```
Use Python for...
                                                                     >>> More
Web Development: Django , Pyramid , Bottle , Tornado , Flask , web2py
GUI Development: tkInter, PyGObject, PyQt, PySide, Kivy, wxPython
Scientific and Numeric: SciPy , Pandas , IPython
Software Development: Buildbot , Trac , Roundup
System Administration: Ansible , Salt , OpenStack
```



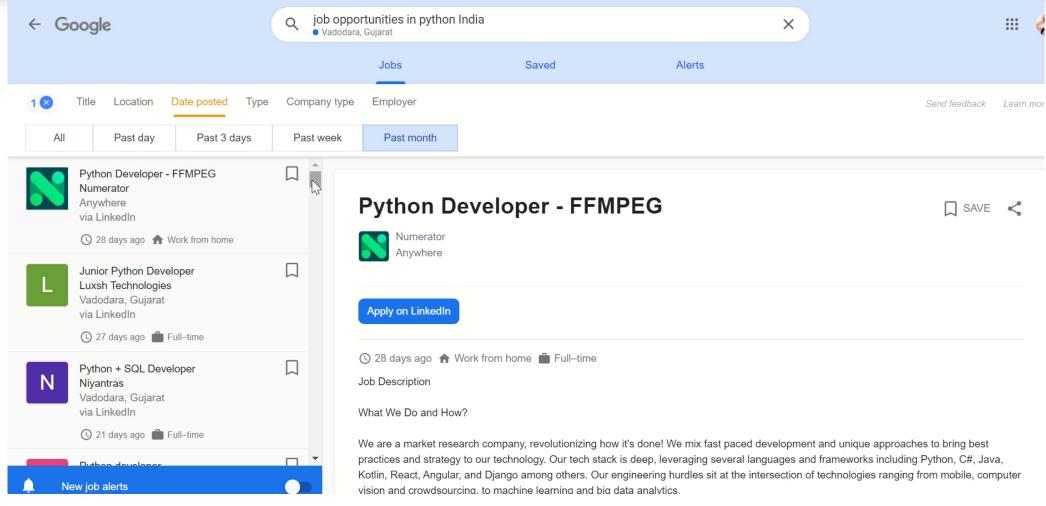
41

### Packages & Projects available for FREE





### Career Opportunities for Python Programmers



STAT MODELLER

### Pay Scale for Python Developer – Entry Level

### **Entry-Level Python Developer Salary**

The average salary of entry-level Python developer salary in India is □427,293.





### Pay Scale for Python Developer - Mid Level

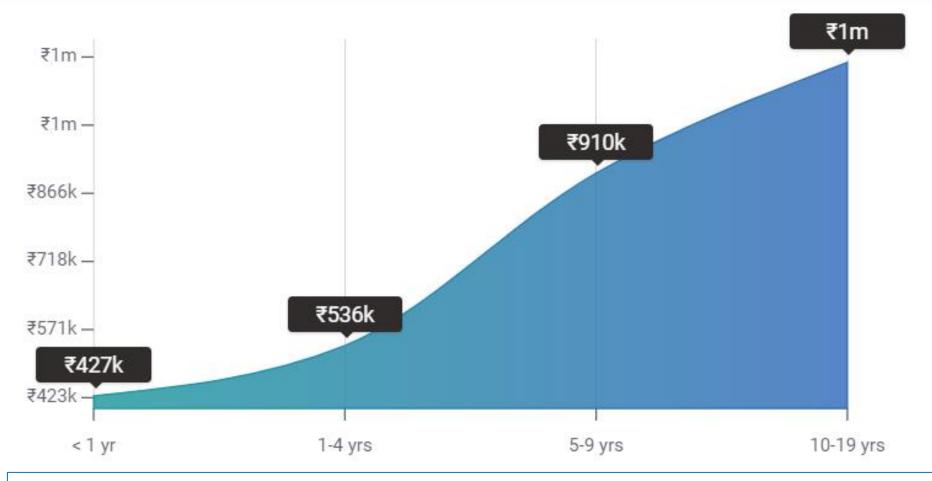
#### Mid-Level Python Developer Salary

The average salary of a mid-level Python developer salary in India is □909,818.





### Python Developer Salary WRT Experience





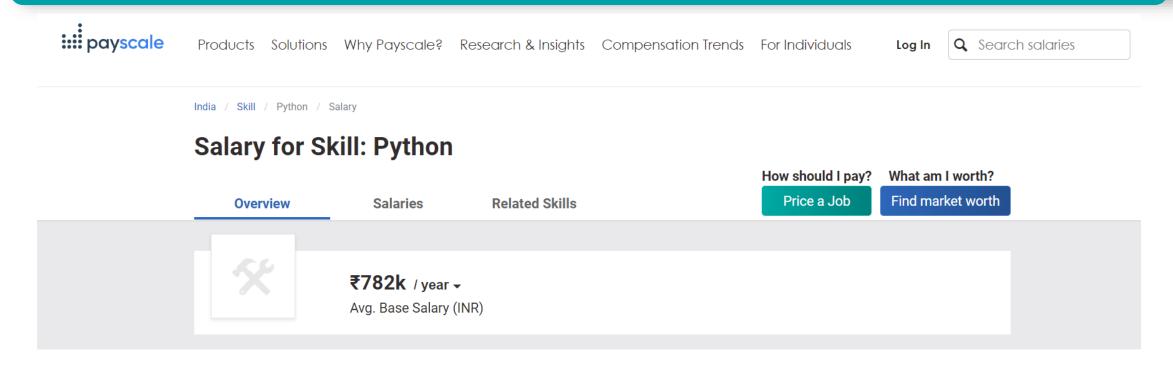
### Salary Package

#### Average Salary





### Packages for Python Programmer





Source: <a href="https://www.payscale.com/research/IN/Skill=Python/Salary">https://www.payscale.com/research/IN/Skill=Python/Salary</a>

### **Companies using Python**





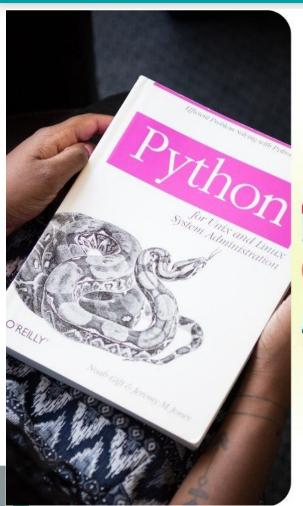
Source: <a href="https://data-flair.training/blogs/python-career-opportunities/">https://data-flair.training/blogs/python-career-opportunities/</a>

### **OUR UPCOMING WORKSHOP ON PYTHON**



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### Python for Data Analytics



### Python for Data Analytics

Transform your data into impactful insight today!



27 TO 31 OCT-2021



7:00 PM TO 9:00 PM



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Instruction-Led Live Classroom



**Curriculum Designed by Experts** 



**Hands-on Coding** 



Real-life Project discussion



Softcopy of Material



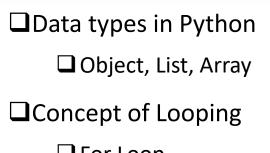
**Exam based Certificate** 



**Recording Access for 6 Months** 

### **Course Content**

- ☐ Introduction to Python
   ☐ Installation Python
   ☐ Options for IDE (Integrated Development Environment)
   ☐ Installation of Anaconda Distribution and Jupyter Framework
- ☐ Basic Operations in Python
  - ☐ Arithmetic Operations
  - ☐ Variable Assignment
  - ☐ String Operator
  - ☐ Introduction to Lists



☐ For Loop

☐ While Loop

☐ Custom Function

☐ Define your own function

☐ Introduction to Numpy Library

□ Data Handling in Python (Using Pandas Library)

☐ Import Pandas Library

☐ Import from .txt, .csv, .xls, html file



### **Course Content**

☐ Working with Data Frame (Using Pandas Library) ☐ Subset of the Data ☐ Adding / Deleting columns or Rows of the data ☐ Numeric Filter, String Filter, Filter with Multiple Conditions ☐ Sorting of the Data ☐ String Operations (Upper Case, Lower Case, Title Case, Replace) □Summarize data ☐ Find Descriptive Statistics using a single command

☐ Use of Group by function for Cross Tabulation

- ☐ Pivot Table in Python (Numpy and Pandas Libraries)
- ☐ Types of Data
  - ☐ Qualitative Data (Nominal and Ordinal)
  - ☐ Quantitative Data (Interval and Ratio)
- ☐ Descriptive Statistics
  - ☐ Measurement of Central Tendency (Mean, Median, Mode)
  - ☐ Measurement of Spread (Range, Variance, Standard Deviation)
  - ☐ Quartile, Frequency Table
- ☐ Data Visualization (Using Matplotlib Library)
  - ☐ Bar chart, Histogram, Pie Chart, Box Plot, Scatter Plot, Matrix Plot

### Q & A



# WELCOME TO STAT MODELLER ROBUST KIT OF SOLUTION



### **MESSAGE FROM**

HIREN KAKKAD

CEO & CO-FOUNDER

Data analysis is an immense part of any problem solving or research. In industry as well as in research, data plays a vital role. Data is collected in a large quantity.

But, the challenges are which techniques to be used and how?

To overcome these challenges, Stat Modeller provides the solutions.





### **HISTORY**

Stat Modeller is formed in 2019 providing services related to training and consultancy for Operational Excellence, Application of Statistical Tools and Data Science Tools to solve the problems of various segments.

### TRAINING AND **CONSULTANCY**

### Data Science

**Machine Learning** R & R Studio **Python SPSS** SAS Minitab **Power BI** Tableau **Basic Excel & Advanced Excel** 

### **Operational Excellence**



Six Sigma Lean **5-S TPM** Kaizen Kanban QMS SPC and SQC

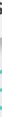
### Research **Projects**

**Research Projects Survey Analysis** Marketing Research etc.

### Universities & Colleges

Workshops **Trainings** Certification **Courses for Faculties** and **Students** 













**Dairy Economics** 

**Home Science** 

Mechanical Engineering

Pharmaceutical Sciences

Financial Management Management Studies

Marketing Management

**Process Industry** 

**Ceramic Industry** 

**Clients** 

Plastic Process Industry

Chemical Industry



Services

History

About



























UNIVERSITY a UGC recognized University







L&T Technology Services













**Through Innovation** 





History

About

Services

### Training on R at UPL









Clients

Services

### PROGRAMS WE DELIVERED



"Basics of SPSS" at BVM Engineering
College



"Base SAS" at Dept. of Statistics, Sardar
Patel University



Snaps

Clients

Services



"Basics of Python", Dept. of Statistics,
Sardar Patel University



"Role of SPSS" at DDU Nadiad

### PROGRAMS WE **DELIVERED**



"Training on R" at **Mumbai University** 



"Training on R" at Anand Agriculture University, Vallabh Vidyanagar



"Training on R" at **AERC, Sardar Patel University** 



"Training on R" at HRDC, Gujarat University



Clients

Services



CEO & CO-FOUNDER

Expert in Data Science, Business Transformation and Research Project Analysis



MEHUL GANDHI
BUSINESS ASSOCIATE
Expert in Business
Transformation and Excel



BUSINESS ASSOCIATE
Expert in Data Science,
Business Transformation and
Research Project Analysis

London, UK



Services

## About

### Let's get connected



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