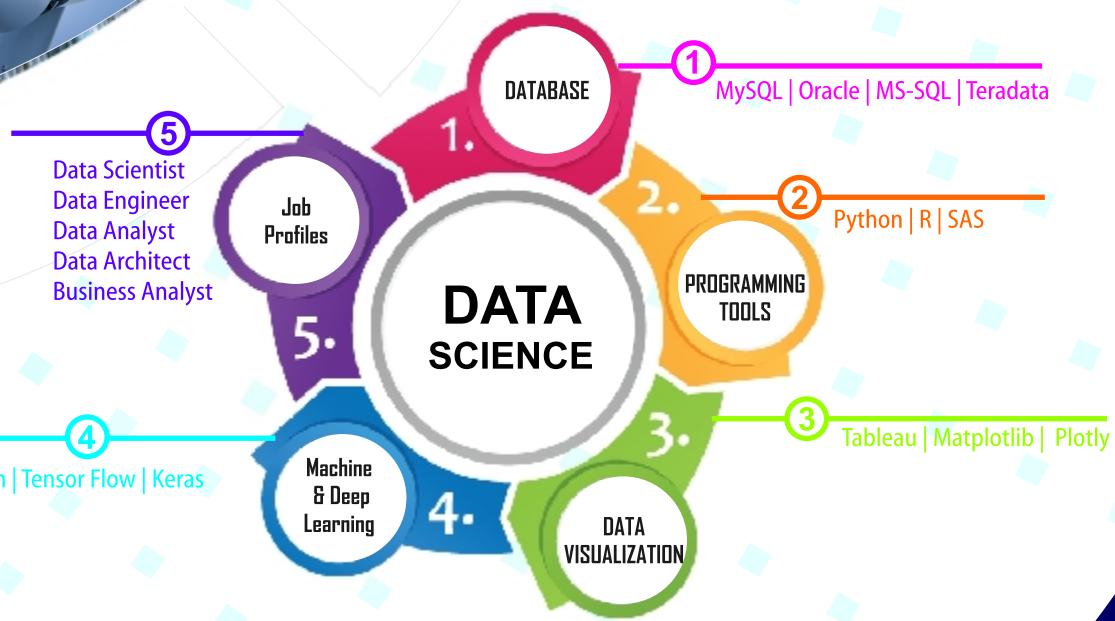


WE MAKE INDUSTRY
READY
DATA SCIENTIST

Master *in* **Data Science**

*Under the Guidance of
Real DATA SCIENTIST*



DATA SCIENCE TRAINING PROGRAM

DATA SCIENCE INTRO

PYTHON PROGRAMMING

R PROGRAMMING

- What is Data Science?
- Why is it so important?
- Applications of Data Science.
- Data Science Methodology.
- Data Scientist Toolbox.
- Future of Data Science.
- **Role of ML & AI.**
- Data Scientists in demand.
- Jobs Prospects Discussion.
- Industries working for.
- Python vs R Discussion
- **Applications of Analytics**
- Different kinds of analytics
- Various analytics tools
- Analytics project methodology
- Real world case study

- **Introduction to Python**
- Installation of Python
- Python Variables & Operators
- Lists, Dictionaries, Tuples & sets
- **Pandas, NumPy & Scipy**
- Data Handling using Pandas
- NumPy arrays & functions
- NumPy properties
- Dataframe functions & properties
- Reading and writing external data
- **Manipulating Data Columns**
- Working with Spyder
- Working with Jupyter Notebooks
- Iterative Operations
- Functions in Python
- User Define Classes & Functions
- **Numeric data in pandas**
- Summarizing categorical data
- Group summary of mixed data
- Introduction to ggplot Seaborn

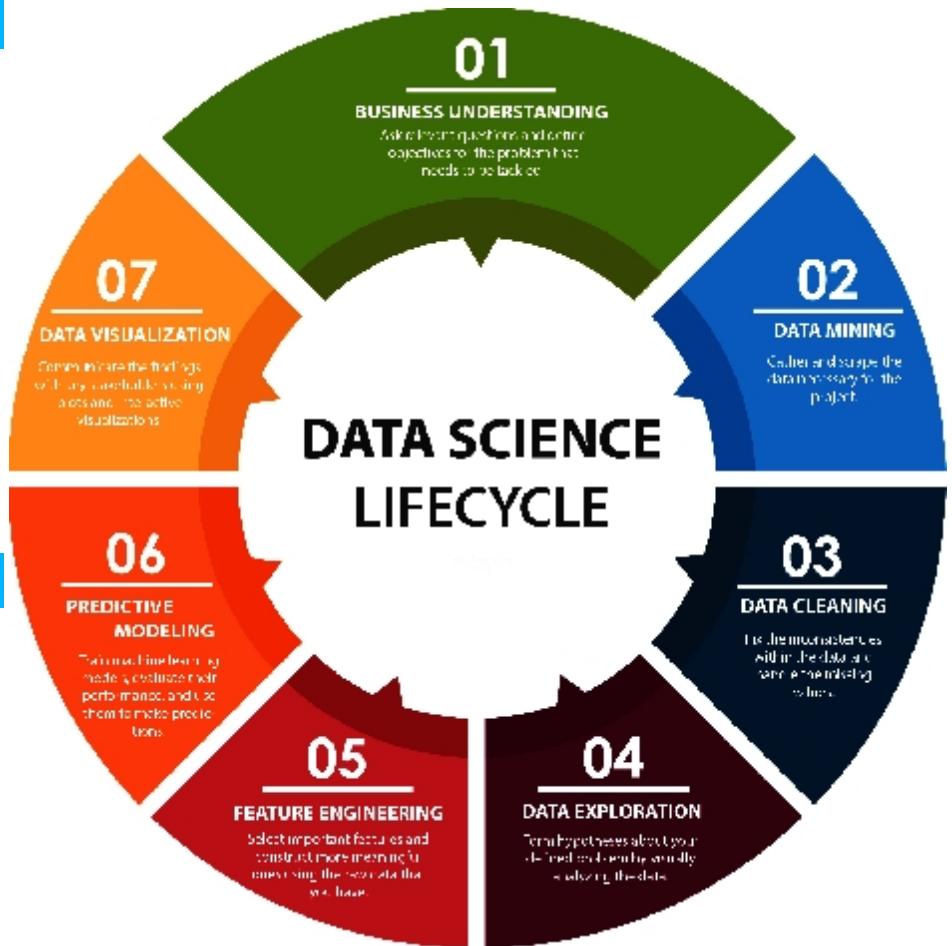
- **R Programming**
- Fundamentals of R
- R Studio Installation
- Data Types & Objects in R
- R Control Structures
- Useful R Packages
- Exploratory Data Analysis
- **Data Manipulation in R**
- Data visualization in R
- Data preparation & cleaning in R
- **Predictive modelling in R**
- Correlation and Linear regression
- Logistic regression
- Customer segmentation
- Time series forecasting
- Decision trees

MySQL

- **Introduction to SQL**
- SQL Data Types & Operators
- Useful Operations in SQL
- Aggregating Data in SQL
- Writing Sub-Queries in SQL
- Common function in SQL
- Analytic Functions in SQL
- **Writing DML Statements**
- Writing DDL Statements
- Using Constraints in SQL
- SQL Joins, Views in SQL
- Stored Procedure

STATISTICS

- **Introduction to Statistics**
- Statistics Terminologies
- Mean, Median, Mode
- Normal Distribution
- Poisson Distribution
- **Categories in Statistics**
- Descriptive Statistics
- Inferential Analysis
- Inferential Statistics



DATA SCIENCE TRAINING PROGRAM

MACHINE LEARNING, DEEP LEARNING & NLP

- Artificial Intelligence Introduction
- Application of Python in AI
- Visualization & Statistics techniques
- Introduction to Machine Learning
- Types and Applications of ML
- Essential Math for ML and AI
- **Supervised Learning**
 - Linear Methods for Regression
 - Multiple Methods for Regression
 - Logistics Methods for Regression
 - Classification Techniques
 - Support Vector Machines
 - Basis Expansions & Model Selection
- **Unsupervised Learning**
 - Association Rules&Cluster Analysis
 - Principal Component Analysis
 - Model Selection & Tuning
 - Feature Expansion & Model Defects
- **Ensemble Techniques**
 - Decision Trees, KNN
 - Boosting, Bagging, Random Forests
 - Adaboosting & Gradient Boosting.
 - Collaborative & Content Based Filtering
 - Hybrid Recommendation Systems
- **Reinforcement Learning**

- Deep Learning
- Introduction to Neural Networks
- Deep Neural Networks Fundamentals
- Understanding of Tensor Flow
- Using Keras for Neural Networks
- **Different Parameters**
- Optimisers, Drop outs & Regularization
- **Image Processing**
 - Using Keras Library with CNNs
 - Convolutional Neural Networks
 - Transfer Learning: AlexNet & ResNet
- Usage of Tensorboard for Visualization
- Graph Visualization, Features & Kernels
- **NLP : Neural Language Processing**
 - Text Extraction Practices
 - N-Grams, Bag of words & TF-IDF
 - LSTM, RNN & GLOVE
 - Machine Translation
 - Sentiment Analysis
 - Intelligent Agents

**JOB
ROLES**

Data Analyst

Data Architect

Data Engineer

Business Analyst

Data Administrator

Data Scientist

DATA VISUALIZATION TECHNIQUES

Matplotlib / Plotly

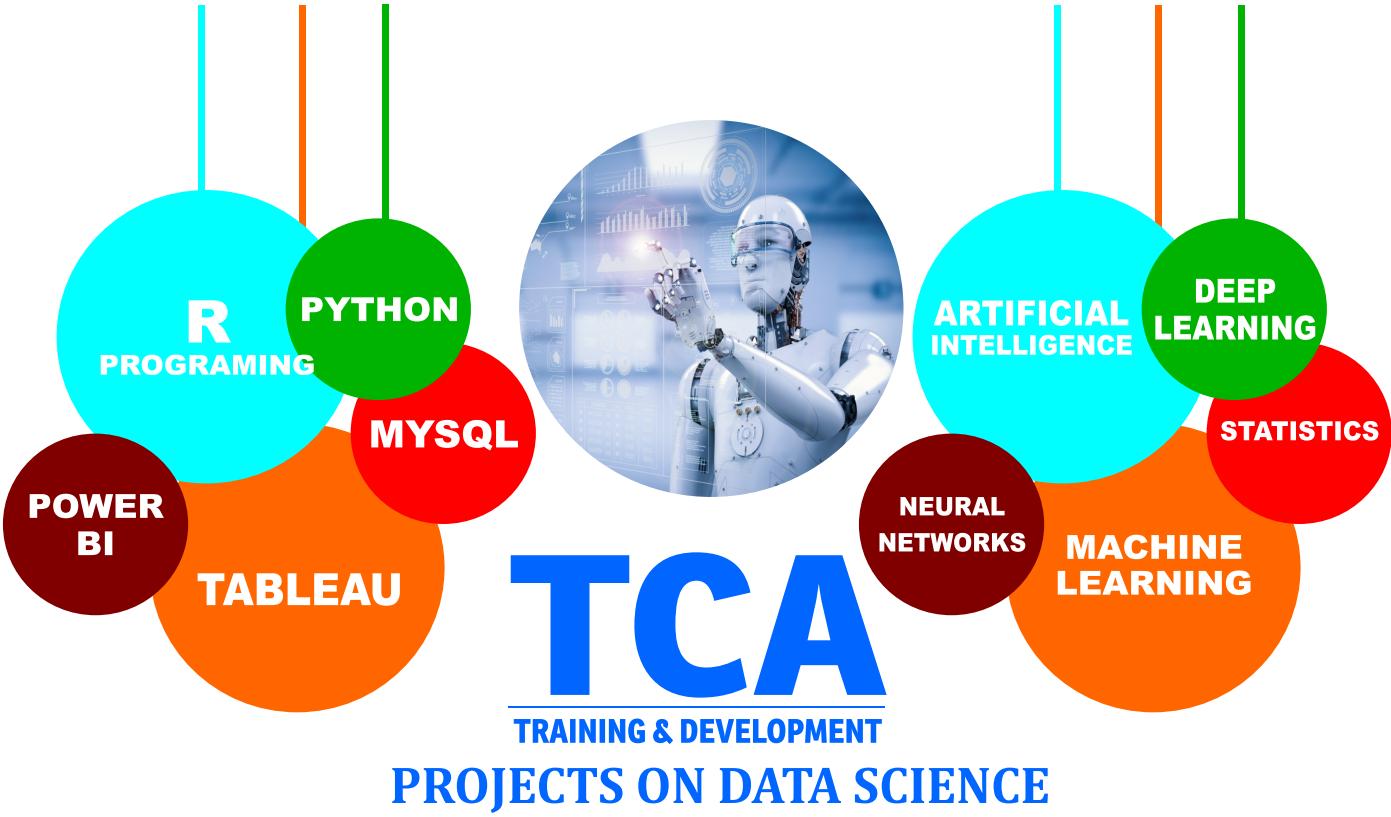
- Basic Matplotlib Graph
- Labels & titles
- Window Buttons
- Histogram
- Multiple Axis
- Bar & Pie chart
- **Scatter & Stack Plots**
 - Loading Data from NumPy & CSV
 - Plotting Different Stock Data
 - Adding & Modifying Grids & Labels
 - Spines Customization
- **Live Graphs**
 - Advanced Customization Options
 - Geographical Plotting
 - 3D Graphing

Tableau

- Tableau & Power BI Overview
- Analysis through Tableau
- Data Files vs Database Server
- Dimensions and Measures
- Tour of Shelves & Views
- Help Menu and Samples
- Saving & sharing your work
- **Working with Dates**
 - Date aggregations & date parts
 - Discrete versus Continuous
 - Dual Axis / Multiple Measures
 - Combo Charts with mark types
- Geographic Map Page Trails
- Heat Map & Density Chart
- **Scatter Plots**
 - Pie & Bar Charts
 - Small Multiples

Data Science Tools

Technologies	Tools
Python	Pycharm
Machine Learning	Scikit Learn
Data Visualization	Matplotlib / Plotly
Deep Learning	Tensor Flow/Keras
NLP	NLTK



1

FACE RECOGNITION

2

RENTAL CAR SHARING

3

HANDWRITING RECOGNITION

4

BANK NOTE ANALYSIS

5

SENTIMENT ANALYSIS

6

CHATBOT

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