Data science is **the domain of study that deals with vast volumes of data using modern tools and techniques to find unseen patterns, derive meaningful information, and make business decisions**. Data science uses complex machine learning algorithms to build predictive models.

The data used for analysis can come from many different sources and presented in various formats.

Use of Data Science

1. Data science may detect patterns in seemingly unstructured or unconnected data, allowing conclusions and predictions to be made.
2. Tech businesses that acquire user data can utilise strategies to transform that data into valuable or profitable information.
3. Data Science has also made inroads into the transportation industry, such as with driverless cars. It is simple to lower the number of accidents with the use of driverless cars. For example, with driverless cars, training data is supplied to the algorithm, and the data is examined using data Science approaches, such as the speed limit on the highway, busy streets, etc.
4. Data Science applications provide a better level of therapeutic customisation through genetics and genomics research.

What Does a Data Scientist Do?

You know what is data science, and you must be wondering what exactly is this job role like - here's the answer. A data scientist analyzes business data to extract meaningful insights. In other words, a data scientist solves business problems through a series of steps, including:

- Before tackling the data collection and analysis, the data scientist determines the problem by asking the right questions and gaining understanding.
- The data scientist then determines the correct set of variables and data sets.

- The data scientist gathers structured and unstructured data from many disparate sources—enterprise data, public data, etc.
- Once the data is collected, the data scientist processes the raw data and converts it into a format suitable for analysis. This involves cleaning and validating the data to guarantee uniformity, completeness, and accuracy.
- After the data has been rendered into a usable form, it's fed into the analytic system—ML algorithm or a statistical model. This is where the data scientists analyze and identify patterns and trends.
- When the data has been completely rendered, the data scientist interprets the data to find opportunities and solutions.
- The data scientists finish the task by preparing the results and insights to share with the appropriate stakeholders and communicating the results.

Who is eligible for data science course?

There is a misconception that only science students are eligible for data science courses. However, there is no stream-specific restriction; **anyone interested in data science** can undertake the course.

Data science Course with Python & AI

Excel

- Introduction
- Get Started & Overview
- Syntax & Range
- Move, Add, Delete Cells
- Undo, Formulas
- Relative, Absolute Ref
- Arithmetic Operators
- Parentheses
- Functions
- Excel Formatting
- Sort, Filter
- Tables
- Conditional
- Highlight Cell Rules
- Data Bars
- Color Scales
- Icon Sets
- Charts
- Charts Customization

Google Sheets

- Introduction
- Overview, Syntax
- Ranges, Fill
- Move, Add, Delete Cells
- Undo Redo
- Formulas
- Sort
- Sort Sheet
- Sort By Range
- Sort Range
- Conditional Formatting
- Single Formatting
- Scale Formatting
- Relative Reference
- Absolute Reference
- Arithmetic Operators
- Parentheses
- Functions
- Location Settings

Statistics

- Introduction
- Gathering Data
- Describing Data
- Conclusions, Prediction
- Populations Samples
- Parameters & Statistics
- Data Types
- Measurement Levels
- Descriptive Statistics
- Frequency Tables
- Histograms
- Bar Graphs, Pie charts
- Box Plots, Average
- Mean, Median, Mode
- Variation, Range
- Interquartile Range
- Standard Deviation

Python

- Introduction
- Get Started
- Syntax, Comments
- Variables
- Data Types
- Casting, Operators
- List, Tuple, Set, Dictionaries
- Conditions
- Loops
- Functions, Lambda
- Classes/Objects
- Inheritance
- Scope
- Modules
- Dates, Math
- PIP
- Try ..Except

MYSQL

- Introduction
- Get Started
- Create Database
- Create Table
- Insert
- Select
- Where
- Order By
- Delete
- Drop Table
- Update
- Limit
- Join

NumPy

- Introduction
- Getting Started
- Creating Array, Array Indexing
- Data Type, Array Shape
- Itering, Join, Split, Search
- Random, Data Distribution
- Random Permutation
- Seaborn Module, Normal
- Logistic Information
- Multinomial Distribution
- Rayleigh Distrubution
- Ufunc

Pandas

- Introduction
- Getting Started
- Series, Dataframes
- Read CSV, JSON, Data
- Cleaning Data, Empty Cells
- Wrong Format, Data
- Correlations
- Plotting

SciPy

- Intro, Getting Started
- Constants, Optimizers
- Sparse Data, Graphs
- Spatial Data, Matlab Array
- Interpolation

Matplotlib

- Intro, Getting Started
- Pyplot
- Plotting
- Markers
- Line, Labels
- Grid, Subplot
- Scatter
- Bars
- Histograms
- Pie Charts

Machine Learning

- Introduction, Getting Started
- Mean Median Mode
- Standard Deviation
- Percentile
- Data Distribution, Scatter
- Linear, Multiple Regression
- Scale, Train/Test
- Decision Tree
- Logistic, Grid Search
- K-search, Bootstrap Alligation
- Cross Validation
- AUC – ROC Curve
- K-nearest neighbours

Artificial Intelligence

- ML Languages
- ML in JavaScript
- Mathematics
- Linear Function
- Linear Algebra
- Vectors
- Matrices
- Statistics
- AI Plotter
- AI Linear Graphs
- AI Scatter Plots
- Clustering
- TensorFlow