

# Data Science Training

Suresh IT's Coaching Training Center introduces an immersive Data Science Training program meticulously crafted to equip participants with advanced skills in data analysis, machine learning, and predictive modelling. This comprehensive course covers a wide range of topics including statistical analysis, data preprocessing, feature engineering, supervised and unsupervised learning algorithms, and model evaluation. By mastering data science techniques and tools such as Python, R, and TensorFlow, graduates are well-prepared to tackle real-world data challenges, derive actionable insights, and drive data-driven decision-making in organisations.

**Course Duration** : 2 Months

**Course Language** : English/Hindi/Telugu

**Classroom** : Offline/Online Training/Hybrid Training

## Description

The Data Science Training course is a comprehensive program designed to equip individuals with the knowledge and skills needed to thrive in the field of data science, which involves extracting insights and knowledge from structured and unstructured data. Geared towards aspiring data scientists, analysts, and professionals from diverse backgrounds, this course offers practical training in data science concepts, techniques, and tools.

Throughout the course, participants will explore various aspects of data science, including data exploration, data preprocessing, statistical analysis, machine learning, and data visualisation. They will learn how to collect, clean, and analyse data using popular programming languages such as Python or R, as well as industry-standard libraries and frameworks such as Pandas, NumPy, scikit-learn, and TensorFlow.

Moreover, the Data Science Training course covers essential topics such as predictive modelling, classification, clustering, regression, and deep learning, enabling participants to build and deploy machine learning models to solve real-world problems. Participants will also learn how to communicate their findings and insights effectively through data visualisation techniques and storytelling.

By the end of the course, participants will be proficient in using data science tools and techniques to extract actionable insights from data, enabling them to make informed decisions, drive innovation, and create value for their organisations. With their newfound expertise in data science, participants will be well-equipped to pursue rewarding career opportunities in data-driven industries such as finance, healthcare, retail, and technology.

## Skills you get

- Machine Learning Algorithms
- Data Wrangling and Preprocessing
- Data Visualization Techniques
- Big Data Technologies (e.g., Hadoop, Spark)

- Experimental Design and A/B Testing
- Statistical Analysis and Inference

# Course Contents

## Introduction to Data Science

- What is Data Science?
- Data Science Lifecycle
- Roles and Responsibilities
- Importance and Applications of Data Science
- Tools and Technologies Overview (Python, R, SQL, etc.)

## Data Acquisition and Cleaning

- Data Collection Methods
- Data Formats (CSV, JSON, XML, etc.)
- Data Cleaning Techniques
- Data Integration and Transformation

## Exploratory Data Analysis (EDA)

- Descriptive Statistics
- Data Visualization
- Univariate, Bivariate, and Multivariate Analysis
- Correlation and Covariance Analysis

## Statistical Analysis

- Probability Distributions
- Hypothesis Testing
- Regression Analysis
- Time Series Analysis

## Machine Learning Fundamentals

- Introduction to Machine Learning

- Supervised Learning
- Unsupervised Learning
- Model Evaluation and Validation

## **Advanced Machine Learning Techniques**

- Dimensionality Reduction
- Ensemble Learning
- Neural Networks and Deep Learning
- Natural Language Processing (NLP)
- Recommender Systems

## **Big Data and Distributed Computing**

- Introduction to Big Data Technologies
- Distributed Data Processing
- Parallel Computing
- Working with Large-scale Datasets

## **Data Science in Practice**

- Data Visualization Best Practices
- Model Deployment and Monitoring
- Ethical Considerations in Data Science
- Case Studies and Real-world Applications
- Future Trends in Data Science

## **Capstone Project**

- Applying learned concepts and techniques to solve a real-world data science problem
- Define problem, collect and preprocess data, perform exploratory analysis, build predictive models, present findings and recommendations

This course structure ensures that learners receive a comprehensive education in data science, covering everything from foundational concepts to advanced

techniques. It also provides ample opportunities for hands-on practice and real-world applications through exercises and a capstone project. Additionally, including modules on ethical considerations and future trends helps learners understand the broader context of data science and its impact on society.