



ShikshaVertex

# Data Science

Become a Master of Data Science



SOLO SPRINT



LIVE EDGE



CAREER EDGE



**Added Extra Credentials From Leaders Like IBM**

**(Give The Exam. Get Certified. Stand Out.)**

**IBM**  
SkillsBuild

**#startupindia**

  
**Skill India**  
कौशल भारत - कुशल भारत



# About ShikshaVertex

## Shaping Skills. Elevating Careers

ShikshaVertex is a next-generation EdTech startup committed to transforming careers through powerful, practical upskilling. In an ever-evolving job market, we bridge the gap between academic knowledge and industry-ready skills.

Our mission is to empower students, job-seekers, and professionals with the tools they need to succeed — from foundational skills to advanced specializations in high-demand fields.

We believe that education is not just about learning — it's about evolving. With industry-aligned curriculum, expert mentorship, and outcome-driven training, ShikshaVertex is where ambition meets execution.

### Career-Focused Upskilling



### Mentor Support



### Industry-Relevant Curriculum



### Flexible Learning



### Hands-on Learning



### Certification & Recognition





## Why ShikshaVertex is Different From Rest?

### Built Different: Our Unique Edge



#### Outcome-Driven Learning

Every course is designed with clear career outcomes and job-readiness as the end goal.



#### Industry-Curated Curriculum

Programs are co-created with industry professionals to stay aligned with current and future skill demands



#### Soft Skills Integration

We don't stop at technical skills — communication, leadership, and interview readiness are built in.



#### Mentorship That Matters

Direct access to mentors who are real-world professionals, not just instructors.



#### Real-World Projects

Learners build a portfolio of hands-on projects that showcase practical expertise.



#### Placement Support

End-to-end job assistance, including resume building, mock interviews, and employer connections.

While many EdTech platforms offer courses, ShikshaVertex is built around outcomes. We don't just teach — we transform.

Our programs are meticulously designed to go beyond theoretical knowledge and focus on practical, real-world skills that employers actually look for.

We blend cutting-edge curriculum with mentorship, hands-on learning, and career development, making sure every learner not only learns but levels up — personally and professionally. At ShikshaVertex, we believe in learning that leads to earning.



## Our Top Recruiters

accenture

Google

Microsoft

ORACLE

Tech  
Mahindra

Deloitte.

tcs  
TATA  
CONSULTANCY  
SERVICES

amazon

fractaboo  
INTELLIGENCE FOR IMAGINATION

IBM.

HCL

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# Scope of Data Science



**11.5 Million**

jobs by 2025



**12,000 +**

Indian businesses are present on LinkedIn



**\$ 230 billion**

Industry in India by 2025



**83% CFOs**

are set to spend more on data science

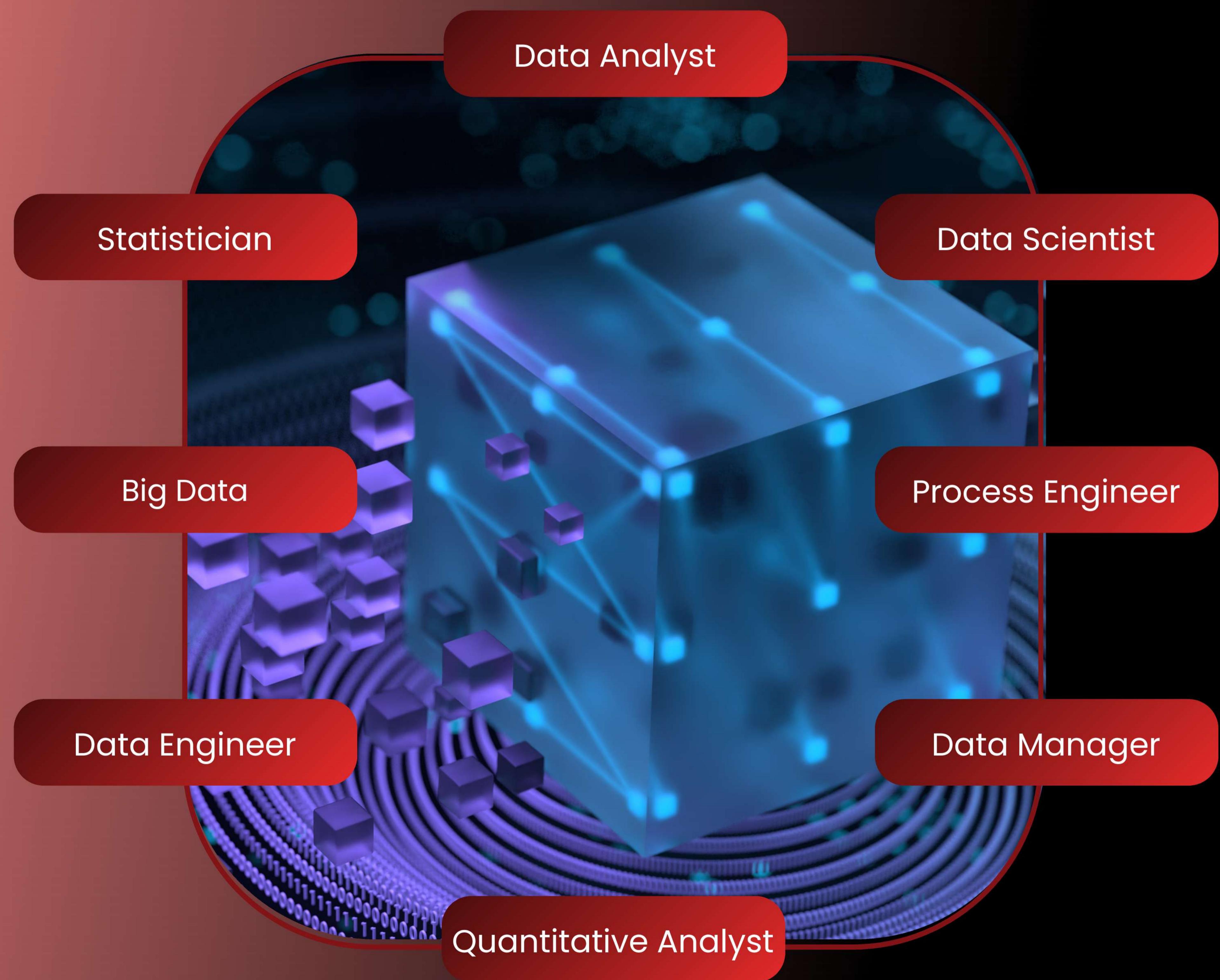
# DATA SCIENCE

Step into the future with data science — where innovation meets opportunity.

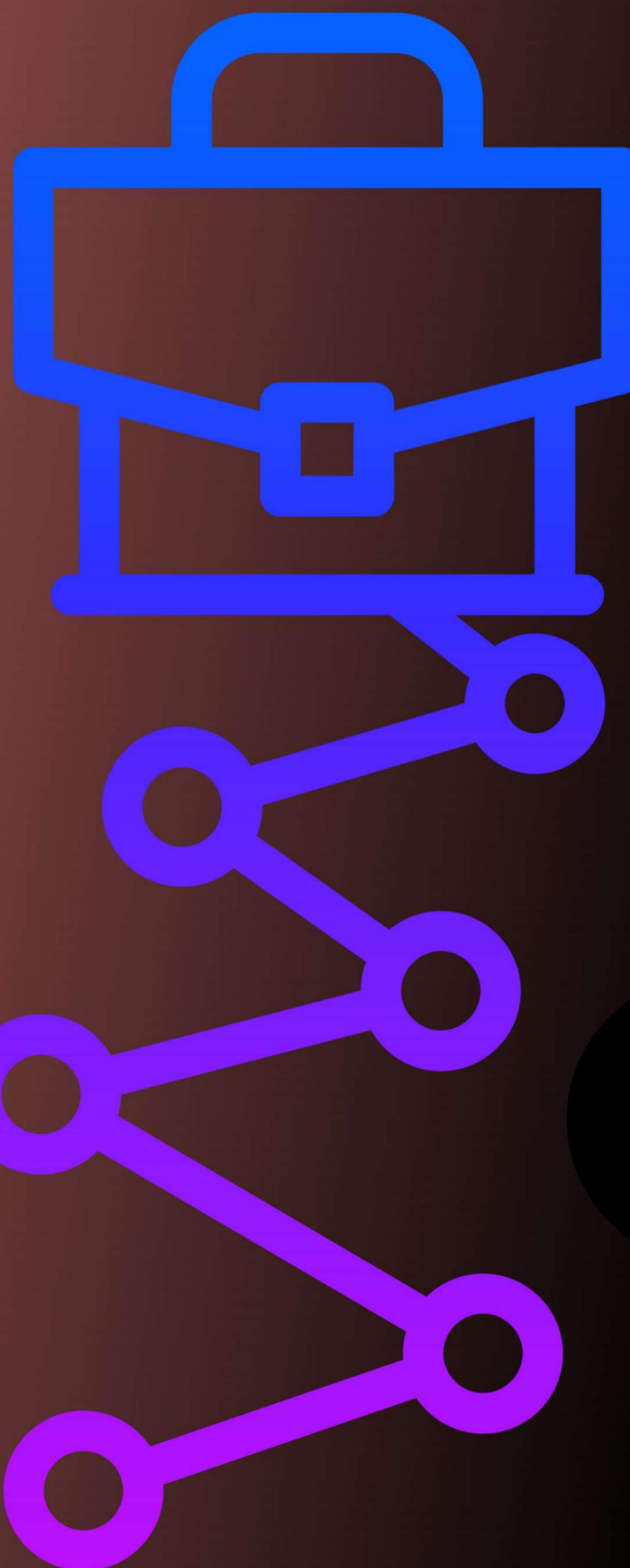
Automate tasks, solve real-world problems, and lead in tomorrow's world.

Join data science today and be part of the revolution shaping our future.

# Here is all the **Career Fields** you can Excel at



Here is how your **Career Trajectory** will look like





1

# Data Science Foundations & Python Programming Essentials

## Introduction to Data Science

- ✓ Definition, Lifecycle, and Scope
- ✓ Real-world Applications
- ✓ Key Tools in Data Science
- ✓ Modern Data Ecosystem

## Python Fundamentals

- ✓ Environment Setup and Syntax
- ✓ Data Types and Control Flow
- ✓ Functions and Modules
- ✓ Best Coding Practice

## Core Library: NumPy

- ✓ Creating and Manipulating Arrays
- ✓ Array Indexing and Slicing
- ✓ Vectorized Operations
- ✓ Mathematical and Statistical Functions



2

## Data Manipulation, Cleaning & Exploratory Data Analysis (EDA)

### Data Handling with Pandas

- ✓ Series and DataFrames
- ✓ Importing and Reading Data
- ✓ Data Selection (loc, iloc)
- ✓ Basic Operations and Summaries

### Data Wrangling and Cleaning

- ✓ Handling Missing Values
- ✓ Removing Duplicates and Inconsistencies
- ✓ Data Type Conversion
- ✓ Basic Feature Engineering

### Data Aggregation and Analysis

- ✓ Grouping and Aggregation
- ✓ Merging and Joining DataFrames
- ✓ Pivot Tables
- ✓ Summarizing Key Insights



### Exploratory Data Analysis (EDA)

- ✓ Descriptive Statistics
- ✓ Correlation and Covariance
- ✓ Outlier Detection
- ✓ Initial Data Visualization

## 3 Data Visualization & Statistical Inference

### Data Visualization Principles

- ✓ Importance of Visualization
- ✓ Chart Selection and Design
- ✓ Storytelling with Data
- ✓ Common Visualization Errors

### Plotting Techniques

- ✓ Matplotlib Basics (Line, Bar, Scatter, Histogram)
- ✓ Seaborn Plots (Boxplot, Heatmap, Pairplot)
- ✓ Plot Customization and Styling
- ✓ Comparative Visual Analysis



## Probability & Distributions

- ✓ Basic Probability Concepts
- ✓ Normal Distribution
- ✓ Central Limit Theorem
- ✓ Sampling and Randomness

## Hypothesis Testing & Estimation

- ✓ Confidence Intervals
- ✓ Null vs. Alternative Hypotheses
- ✓ P-values and Significance
- ✓ T-test and Chi-square Applications

# 4

## Machine Learning Fundamentals & Model Building

### Introduction to Machine Learning

- ✓ Types of Machine Learning
- ✓ ML Workflow and Pipeline
- ✓ Overview of Scikit-learn
- ✓ Real-world ML Applications



## Supervised Learning: Regression

- ✓ Linear Regression Concepts
- ✓ Model Training and Prediction
- ✓ Evaluation Metrics ( $R^2$ , MSE, RMSE)
- ✓ Interpreting Regression Results

## Supervised Learning: Classification

- ✓ Logistic Regression Basics
- ✓ Sigmoid Function and Decision Boundaries
- ✓ K-Nearest Neighbors (KNN)
- ✓ Model Performance Evaluation

## Model Evaluation & Best Practices

- ✓ Train/Test/Validation Splits
- ✓ Classification Metrics (Precision, Recall, F1)
- ✓ Overfitting and Underfitting
- ✓ Model Improvement Techniques



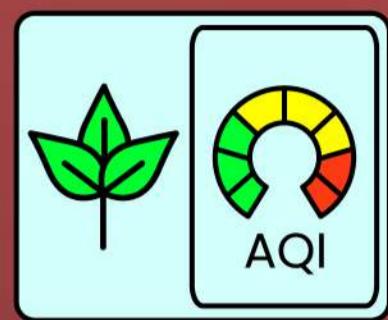
## Tools and Technologies you'll Learn





## Minor Projects :

Air Quality  
Data  
Analysis



Analyze air pollution levels and visualize trends over time for different cities.

YouTube  
Channel  
Statistics



Study engagement metrics (likes, views, comments) to understand what drives popularity.

Spotify  
Song Trend  
Analysis



Examine song attributes (danceability, energy, tempo) to discover musical patterns.



## Major Projects :

Predicting  
House  
Prices



Train regression models to estimate property prices using multiple features.

Stock Market  
Price  
Prediction



Use time series analysis or regression to predict stock price movements.

Healthcare  
Disease  
Prediction



Build models to predict conditions like diabetes or heart disease using patient data.



## Showcase your Learning Journey

### CERTIFICATE OF INTERNSHIP



ShikshaVertex

This Certificate is proudly presented to

**ROHAN RATHORE**

In recognition of exceptional performance, dedication, and outstanding contribution during the **Internship program at ShikshaVertex**.

Your enthusiasm for learning, consistent effort, and commitment to excellence have set a remarkable example for others. Through your work, you have demonstrated creativity, professionalism, and a passion for growth that align perfectly with the values of ShikshaVertex.

We commend your achievements and wish you continued success in all your future endeavors.

Date

Signature(Academic Head)



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**Certificate of Completion  
from ShikshaVertex**

Certificate of Internship  
from ShikshaVertex

### CERTIFICATE OF TRAINING



ShikshaVertex

This Certificate is proudly presented to

**ROHAN RATHORE**

In recognition of exceptional performance, dedication, and outstanding contribution during the **Internship program at ShikshaVertex**.

Your enthusiasm for learning, consistent effort, and commitment to excellence have set a remarkable example for others. Through your work, you have demonstrated creativity, professionalism, and a passion for growth that align perfectly with the values of ShikshaVertex.

We commend your achievements and wish you continued success in all your future endeavors.

Date

Signature(Academic Head)



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# CONTACT US



+91-9978456702



[www.shikshavertex.in](http://www.shikshavertex.in)



2nd floor, Srivari Arcade, NGR Layout, Roopena Agrahara,  
Bommanahalli, Bengaluru, Karnataka 560068



[admin@shikshavertex.in](mailto:admin@shikshavertex.in)