

# **DATA SCIENCE WITH MACHINE LEARNING**& ARTIFICIAL INTELLIGENCE

Become Proficient in Python, Numpy, Pandas, Matplotlib, Seaborn, Sklearn, Machine Learning, Deep Learning, Computer Vision, NLP













# Career Opportunities In DATA SCIENCE with **Machine Learning & Al**



#### **Data Scientist**

Analyzes data to extract insights and build predictive models for informed decision-making.



#### Data Analyst

Gathers, cleans, and visualizes data to provide actionable insights for businesses.



#### **Data Engineer**

Manages data collection, cleaning, and transformation for analysis.



#### **NLP Engineer**

Develops language algorithms for chatbots, sentiment analysis, and translation.



#### **Machine Learning** Engineer

Develops and deploys machine learning models for real-world applications.



#### **Business Intelligence** Analyst

Creates data reports and visualizations to monitor and inform business performance.



#### Al Researcher

Advances artificial intelligence by developing new algorithms and models.



#### Python Developer

Codes, tests, and maintains software, specializing in web development, data analysis, or automation.



### A Brief About UPFLAIRS

UpFlairs is an innovative educational technology company with a clear mission to elevate the skills and employability of students throughout India.

Our dedicated team is committed to fostering the next generation of tech talent, equipping them with cutting-edge skills in emerging technologies and has educated more than 47K students all over the globe including IITs, NITs, Deemed Universities and other colleges.

We offer the courses that are most trending technologies of the recent era in the fields like AI/ML, Data Science, Cloud Computing, DevOps, Full Stack Web Development, Embedded Systems, IoT, and Robotics. These courses are meticulously designed to provide students with the practical skills and knowledge required to excel in tech-driven careers, making them not just job-ready but industry leaders of tomorrow.

We are not only limited to training the youth of the country but also provide Lab setups to various Colleges and Universities and Project solutions to other companies for the domains like AI-ML, IOT, ROBOTICS AND CLOUD.







#### Who Should Go for This DATA SCIENCE WITH MACHINE **LEARNING & AI?**



Start shaping your career right from college time by learning in-demand skills like Data Science with Machine Learning & Al.



Time for you to upskill, prepare yourself for a bright future, and kickstart a career in Data Science with Machine Learning & Al.



Not sure which career is right for you? Not finding any jobs? Learn Data Science with Machine Learning & AI with us to land your first job.



Whether you're already a freelance Data Scientist or looking to launch your career in freelancing, expertise in Machine Learning & AI is the most lucrative skill set for freelancers in the data science domain.



Not satisfied with your current job profile? Switch to Machine Learning & AI, an easy-to-learn, most impressive, and highly-paid skill.





## Why Learn DATA SCIENCE WITH MACHINE LEARNING & AI With Upflairs Only?



Our training and support system intrigue learners.



We offer 100% practical training with regular assessment, assignment and projects.



You can upskill yourself from anywhere by joining our live training batches Also we provide classroom training in Jaipur.



You will get to work on multiple projects during the training so that you can gain some experience.



Professional Trainers having experience of delivering more than 30k students. We ensure the high quality training always aimed at career building.



The certificate received by the learners on course completion is valid nationally and internationally. You can easily share, add it to your resume and explore great opportunities.



We help you build a great career as a developer. Our team offers you career guidance, pepares you for interview, and assists you in finding job.



The course includes most comprehensive Curriculum, covering all breadths and depths in detail.









	DATA SCIENCE WITH MACHINE LEARNING & ARTIFICIAL INTELLIGENCE  Duration - 30 Days (60 Hours)				
1	Introduction (2 Hours)	<ul> <li>Introduction with AI &amp; Machine Learning</li> <li>Data Science vs Data Engineering vs Data Analysis vs AI</li> <li>Use of Data in the world of AI</li> <li>Connecting with Upflairs Community</li> <li>Basic Linux/Windows Commands</li> <li>Setting Up GITHUB &amp; Google Colab/Kaggle</li> </ul>			
2	Python Overview (8 Hours)	<ul> <li>Command line &amp; Script based Python Programming</li> <li>Python Quicker Keywords, Data Types, Operators</li> <li>Conditional/Looping/Error Handling in Python</li> <li>Comprehensions</li> <li>Python User Defined Functions</li> <li>Python iterator</li> <li>Lambda Expressions</li> <li>Map, filter, reduce, zip, enumerate.</li> <li>Python Modules: Usage and Installation</li> <li>Understanding the OOP of Python</li> <li>Classes, Objects, Methods;</li> <li>Inheritance: Its types</li> <li>Polymorphism</li> <li>Encapsulation</li> </ul>			
	Mini Project (4 hours)	Projects 1 :  • "Email sender"  • "CLI based chat application"			
3	Data in Python (2 Hour)	<ul> <li>Types of DATA?</li> <li>Numpy Arrays: Creating, Accessing, Manipulating</li> <li>Array Attributes; Data Operations</li> <li>The file handling in python</li> <li>Dealing with Excel/CSV/txt files</li> </ul>			
4	Pandas (2.5 Hours)	<ul> <li>Pandas: The Series and DataFrame</li> <li>Creating, Accessing, Manipulating Pandas Data</li> <li>Series and DataFrame Attributes &amp; Basic Functions · Arithmetic and Statistical</li> <li>Methods; Sort, Search, Count · Data Grouping, Missing Data Handling</li> <li>Merging &amp; Joining of Data</li> <li>File Handling with Pandas</li> </ul>			

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5	Data Visualization (4 Hours)	<ul> <li>Data is Beautiful!!!</li> <li>Visualization Libraries in Python</li> <li>MATPLOTLIB PYPLOT: line, scatter, pie, box, area etc</li> <li>Decorating the plots using Matplotlib (labels, colors, markers, legend, grids, figure sizes etc)</li> <li>The Subplots and axes in matplotlib; Showing Images</li> <li>Pandas Visualization: Basic Plots</li> <li>bar, barh, hist, box, kde, density, area, scatter, hexbin, pie plots</li> <li>Plotting with Missing Data</li> <li>Easy and advanced Data Visualization from Seaborn</li> <li>Categorical, Distributive, Regression, Matrix, Grid Plots</li> <li>Exercise</li> </ul>
6	Introduction with Machine Learning (2 Hours)	<ul> <li>Introduction of machine learning</li> <li>Supervised and unsupervised machine learning.</li> <li>Regression and classification and clustering</li> </ul>
7	Machine Learning - Regression (4 Hours)	<ul> <li>LinearRegression , Polynomial Regression: The Non-linearity in Data</li> <li>Performance Evaluation of Regression Mode</li> </ul>
8.	Supervised ML - Classification (12 Hours)	<ul> <li>Logistic Regression: Concept &amp; Need</li> <li>Performance Evaluation of Classifications Models</li> <li>Support Vector Machines (SVM)</li> <li>Kernel Nearest Neighbors (KNN)</li> <li>Decision Trees Classifier</li> <li>Random Forest Classifier</li> <li>Biases versus variances</li> <li>Data Overfitting &amp; Underfitting</li> <li>The Concept of Cross-validation</li> <li>The Bayes Theorem</li> <li>Naïve Bayes Algorithm for Machine Learning</li> </ul>
	Mini Project	Projects 2:



9	Unsupervise d Machine Learning (6 Hours)	<ul> <li>K-Means Clustering</li> <li>Performance metrics for clustering techniques</li> <li>Hierarchical clustering analysis</li> <li>Exercise</li> </ul>
10	Capstone Project on machine learning. (4 hours)	Capstone Project 1: "Crop Monitoring and Disease Detection"
11	Deep learning & Artificial Neural Network (2.5 Hour)	<ul> <li>Concept of Deep Learning &amp; Neural Network</li> <li>What is ANN?</li> <li>The basic terminology – Layers, weights, biases, activation functions, losses, optimizers, learning rate</li> <li>The Concept of Forward &amp; Backward Propagation</li> <li>Using Keras Library for ANN</li> <li>Building and Compiling Sequential Neural Network Mode</li> <li>Exercise</li> </ul>
12	Mini Project (3 Hours)	Project 3: • "Building Churn Prediction System for customers using ANN"
6	Capstone Project (4 hours )	Capstone Project 2: "Airline loyal and disloyal customer segmentation"





From Startups & SMBs to Brands & MNCs, companies are actively looking for skilled

Data Science with Machine Learning & Al Engineer at lucrative packages.

Grab these opportunities by holding mastery of **Data Science with Machine Learning & Al!** 

