

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 & AI



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.



AI 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**?



College Student

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



Graduate

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



College Dropout/Job Seeker

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.



Freelancer

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.



Looking to Switch Career

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?



Trusted by Learners

Our training and support system intrigue learners.



Expert Trainers

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



Completely Practical-Oriented

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



Industry-Recognized Certification

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.



Online & Offline Batches

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



Career Assistance

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



Hands-On Projects

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



Comprehensive Curriculum

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

Project Titles

Capstone Projects:

1. *Airline loyal and disloyal customer segmentation*
2. *Develop Deep Learning or Generative AI Based Chatbot*

Project Major + Minor (18+)

1. *Email sender*
2. *CLI based chat application"*
3. *Email spam & ham classification*
4. *Laptop price prediction*
5. *Old bike price prediction*
6. *Bangalore House Price Prediction.*
7. *Crop Monitoring and Disease Detection*
8. *Building Churn Prediction System for customers using ANN*
9. *Airline loyal and disloyal customer segmentation*
10. *Cat/Dog Classifier*
11. *handwritten MNIST digit recognition*
12. *Insurance premium prediction using ANN*
13. *Cat/Dog Classifier*
14. *MNIST image recognition*
15. *Flower image classification using transfer learning*
16. *Email spam or ham classification using RNN*
17. *Hate speech recognition using LSTM*
18. *Develop Deep Learning "or" Generative ai based chatbot.*

DATA SCIENCE WITH MACHINE LEARNING & ARTIFICIAL INTELLIGENCE		
Part 1 : Duration – 30 Days (60 Hours)		
1	Introduction (2 Hours)	<ul style="list-style-type: none"> • Introduction with AI & Machine Learning • Data Science vs Data Engineering vs Data Analysis vs AI • Use of Data in the world of AI • Connecting with Upflairs Community • Basic Linux/Windows Commands • Setting Up GITHUB & Google Colab/Kaggle
2	Python Overview (8 Hours)	<ul style="list-style-type: none"> • Command line & Script based Python Programming • Python Quicker: Keywords, Data Types, Operators • Conditional/Looping/Error Handling in Python • Comprehensions • Python User Defined Functions • Python iterator • Lambda Expressions • Map,filter,reduce,zip,enumerate. • Python Modules: Usage and Installation • Understanding the OOP of Python • Classes, Objects, Methods; • Inheritance: Its types • Polymorphism • Encapsulation
	Mini Project (4 hours)	Projects : <ul style="list-style-type: none"> • <i>"Email sender"</i> • <i>"CLI based chat application"</i>
3	Data in Python (2 Hour)	<ul style="list-style-type: none"> • Types of DATA? • Numpy Arrays: Creating, Accessing, Manipulating • Array Attributes; Data Operations • The file handling in python • Dealing with Excel/CSV/txt files
5	Data Visualization (4 Hours)	<ul style="list-style-type: none"> • Data is Beautiful...!!! • Visualization Libraries in Python • MATPLOTLIB PYPLOT: line, scatter, pie, box, area etc • Decorating the plots using Matplotlib (labels, colors, markers, legend, grids, figure sizes etc) • The Subplots and axes in matplotlib; Showing Images • Pandas Visualization: Basic Plots • bar, barh, hist, box, kde, density, area, scatter, hexbin, pie plots • Plotting with Missing Data • Easy and advanced Data Visualization from Seaborn

		<ul style="list-style-type: none"> Categorical, Distributive, Regression, Matrix, Grid Plots Exercise
6	Introduction with Machine Learning (2 Hours)	<ul style="list-style-type: none"> Introduction of machine learning Supervised and unsupervised machine learning. Regression and classification and clustering
7	Machine Learning – Regression(4 Hours)	<ul style="list-style-type: none"> LinearRegression , Polynomial Regression: The Non-linearity in Data Performance Evaluation of Regression Mode
8.	Supervised ML – Classification (12 Hours)	<ul style="list-style-type: none"> Logistic Regression: Concept & Need Performance Evaluation of Classifications Models Support Vector Machines (SVM) Kernel Nearest Neighbors (KNN) Decision Trees Classifier Random Forest Classifier Biases versus variances Data Overfitting & Underfitting The Concept of Cross-validation The Bayes Theorem Naïve Bayes Algorithm for Machine Learning
	Mini Project	Projects 2: <ul style="list-style-type: none"> <i>Email spam & ham classification</i> <i>Laptop price prediction</i> <i>Old bike price prediction</i> <i>Bangalore House Price Prediction.</i>
9	Unsupervised Machine Learning (6 Hours)	<ul style="list-style-type: none"> K-Means Clustering Performance metrics for clustering techniques Hierarchical clustering analysis Exercise
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 style="list-style-type: none"> • Concept of Deep Learning & Neural Network • What is ANN? • The basic terminology – Layers, weights, biases, activation functions, losses, optimizers, learning rate • The Concept of Forward & Backward Propagation • Using Keras Library for ANN • Building and Compiling Sequential Neural Network Mode • Exercise
12	Mini Project (3 Hours)	Project 3: <ul style="list-style-type: none"> • “Building Churn Prediction System for customers using ANN”
6	Capstone Project (4 hours)	Capstone Project 2: “Airline loyal and disloyal customer segmentation”
Part 2 : Duration – 15 Days (30 Hours)		
1	Web Scrapping (3.5 Hours)	<ul style="list-style-type: none"> • What are web servers and how HTML look-like? • Scrapping the Live Data Exercise
2	Advance model DL model evaluation & model optimization techniques (2.5Hours)	<ul style="list-style-type: none"> • Hyperparameter Tuning • Regularization L1/L2 regularization, • Drop out layer • earlystopping
3	ANN implementation for regression (3 hours)	<ul style="list-style-type: none"> • Learn ANN implementation for regression • Understand ANN working for ANN • Implement ANN with real world dataset
	Mini Project	Project: <ul style="list-style-type: none"> • Insurance premium prediction
4	Convolutional Neural Network – Keras (1.5 Hour)	<ul style="list-style-type: none"> • Image processing, image formation, learn about pixels. • The Convolution Theory – Filters, Pools, Averaging etc. • Generating Convolution Neural Network Models • Image Data Augmentation.
	Mini Project (3 Hour)	Project :

		<ul style="list-style-type: none"> • <i>Cat/Dog Classifier</i> • <i>MNIST image recognition</i>
5	Transfer Learning (1 hours)	<ul style="list-style-type: none"> • Understand the transfer learning techniques • How transfer learning techniques getting popular. • Learn implementation of transfer learning.
	Mini Project (2 Hour)	<i>Projects:</i> <ul style="list-style-type: none"> • <i>Flower image classification using transfer learning</i>
6	Natural Language Processing (1.5 Hours)	<ul style="list-style-type: none"> • What is NLP? Linguistic to Natural Language! • NLU and NLG component of NLP. • NLTK in Python for Text Processing • Text to Speech and Speech to Text Modules in Python • Morphological Analysis; Syntactic Analysis • Generating Word Clouds
7	Recurrent Neural Network (6 Hours)	<ul style="list-style-type: none"> • What is RNN • How RNN is different from ANN • Understand the working process of RNN. • The Concept of Long-Short-Term Memory (LSTM) • LSTM based Neural Networks for Future Prediction!!
8	Mini Project	<i>Projects:</i> <ul style="list-style-type: none"> • <i>Email spam or ham classification using RNN</i> • <i>Hate speech recognition using LSTM</i>
9	Project Deployment (2 hours)	<ul style="list-style-type: none"> • Introduction of deployment process. • Various platform to deploy the project.(aws , gcp, azure). • Manual Deployment and deployment with automation understanding. • Lab on deployment process of project.
	Capstone Project (4 Hours)	<i>Projects 3 :</i> <ul style="list-style-type: none"> • <i>Develop Deep Learning "or" Generative ai based chatbot.</i>

Banasthali Vidyapeeth

Upflairs
Security winning takes it all
INDUSTRY 4.0

The Cloud Revolution

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Glimpse of Events

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Banasthali Vidyapeeth



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info@upflairs.com



9251494002, 6350417917



100/110ps, Rana Sanga Marg, Near Kumbha
Marg, Pratap Nagar, Jaipur , Rajasthan

