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Ezeal Tech
learn | explore | empower

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Data Science Certificate Course By The Industrial Experts

Course Overview

Data Science and Machine Learning are closely related fields that deal with extracting insights, patterns, and knowledge from data. While Data Science is a broader field that encompasses various techniques and processes for handling and analyzing data, Machine Learning is a specific subset of Data Science that focuses on developing algorithms and models that can learn patterns and make predictions or decisions based on data.

Here's an overview of Data Science and Machine Learning:

Data Science is an interdisciplinary field that combines techniques from mathematics, statistics, computer science, and domain knowledge to extract meaningful insights from data. It involves various stages of the data lifecycle, including data collection, data cleaning and preprocessing, exploratory data analysis, data visualization, feature engineering, and model building.

- Problem Formulation: Identifying the business problem or research question that needs to be addressed.
- Data Collection: Gathering relevant data from various sources.
- Data Cleaning and Preprocessing: Removing inconsistencies, handling missing values, and transforming the data into a suitable format for analysis.
- Exploratory Data Analysis (EDA): Exploring and visualizing the data to gain insights and identify patterns or relationships.
- Feature Engineering: Selecting, creating, or transforming features that are relevant for the problem at hand.
- Model Building: Developing statistical or machine learning models to predict or explain the target variable.
- Model Evaluation and Validation: Assessing the performance of the models and validating them using appropriate evaluation metrics.
- Deployment and Communication: Presenting the results and findings to stakeholders in a clear and actionable manner.

Pre-Requisites

- Mathematics and Statistics
- Programming Skills
- Data Manipulation and Analysis
- Probability and Statistics
- Machine Learning Concepts
- Data Structures and Algorithms

Remember that these pre-requisites are general recommendations, and the actual requirements may vary depending on the course or program you are pursuing. Learning and curiosity are essential qualities in the field of data science, as it is a rapidly evolving field with new tools and techniques emerging regularly.

Benefits of Learning Data Science

Learning data science offers numerous benefits, as it is a rapidly growing field with a high demand for skilled professionals. Here are some of the key benefits of learning data science:

- High Demand and Career Opportunities
- Lucrative Salaries
- Problem-Solving and Decision-Making Skills
- Innovation and Competitive Advantage
- Data-Driven Decision-Making
- Interdisciplinary Skills
- Solving Real-World Problems

Overall, learning data science offers a pathway to exciting career opportunities, high earning potential, and the ability to leverage data for informed decision-making, innovation, and problem-solving across diverse industries.

Related Job Roles

- Data Scientist
- Data Analyst
- Machine Learning Engineer
- Business Intelligence Analyst
- Data Engineer
- Data Architect
- Statistician
- Data Consultant

These are just a few examples of the many job roles related to data science. The field is diverse, and job titles and responsibilities may vary across industries and organizations. However, the demand for skilled data professionals is consistently growing, providing ample opportunities for individuals with data science expertise.

Available Training Options

- Online/Offline
- Weekdays Batches
- Weekend Batches
- Course - Duration: 90 Days
- Mode of Training - Online - Live Online Classes
- Daily 1Hr(Need to have a laptop or Computer with Good Internet)

Dedicated Trainer, Practical sessions. One-on-One Live Training Session with Hands-on Practical Training.
For fees details and discounts whatsapp on Phno: +91 8050123030

Data Science Training Syllabus

Introduction to python

- History
- Features
- Setting up path
- Working with Python
- Basic Syntax
- Variable and Data Types
- Operator

Conditional Statements

- If- else
- elif
- Nested if-else

Looping

- For
- While
- Nested loops

Control Statements

- Break
- Continue
- Pass

String Manipulation

- Accessing Strings
- Basic Operations
- String slices
- Function and Methods

Lists

- Introduction
- Accessing list
- Operations
- Working with lists
- Function and Methods

Tuple

- Introduction
- Accessing tuples
- Operations
- Working
- Functions and Methods

Dictionaries

- Introduction
- Accessing values in dictionaries
- Working with dictionaries
- Properties
- Functions

Functions

- Defining a function
- Calling a function
- Types of functions
- Function Arguments
- Anonymous functions
- Global and local variables

Modules

- Importing module
- Math module
- Random module
- Packages
- Composition

Input-Output

- Printing on screen
- Reading data from keyboard
- Opening and closing file
- Reading and writing files
- Functions

Exception Handling

- Exception
- Exception Handling
- Except clause
- Try ? finally clause
- User Defined Exceptions

Advance Python
OOPs concept

- Class and object
- Attributes
- Inheritance
- Overloading
- Overriding
- Data hiding

Regular expressions

- Match function
- Search function
- Matching VS Searching
- Modifiers
- Patterns

Multithreading

- Thread
- Starting a thread
- Threading module
- Synchronizing threads
- Multithreaded Priority Queue

Introduction to Data Science

- Python for Data Science
- What is Data?
- Python Pandas
- Python Numpy
- Python Scikit-learn
- Python Matplotlib

Data Processing

- Understanding Data Processing
- Python: Operations on Numpy Arrays
- Overview of Data Cleaning
- Slicing, Indexing, Manipulating and Cleaning Pandas Dataframe
- Working with Missing Data in Pandas
- Pandas and CSV
- Python | Read CSV
- Export Pandas dataframe to a CSV file
- Pandas and JSON
- Pandas | Parsing JSON Dataset
- Exporting Pandas DataFrame to JSON File
- Working with excel files using Pandas

Python Relational Database

- Connect MySQL database using MySQL-Connector Python
- Python: MySQL Create Table
- Python MySQL – Insert into Table
- Python MySQL – Select Query
- Python MySQL – Update Query
- Python MySQL – Delete Query
- Python NoSQL Database
- Python Datetime
- Data Wrangling in Python
- Pandas Groupby: Summarising, Aggregating, and Grouping data
- What is Unstructured Data?

Data Visualization

- Data Visualization using Matplotlib
- Style Plots using Matplotlib
- Line chart in Matplotlib
- Bar Plot in Matplotlib
- Box Plot in Python using Matplotlib
- Scatter Plot in Matplotlib
- Heatmap in Matplotlib
- Three-dimensional Plotting using Matplotlib
- Time Series Plot or Line plot with Pandas
- Python Geospatial Data
- Other Plotting Libraries in Python
- Data Visualization with Python Seaborn
- Using Plotly for Interactive Data Visualization in Python
- Interactive Data Visualization with Bokeh

Statistics

- Measures of Central Tendency
- Statistics with Python
- Measuring Variance
- Normal Distribution
- Binomial Distribution
- Poisson Discrete Distribution
- Bernoulli Distribution
- P-value
- Exploring Correlation in Python
- Create a correlation Matrix using Python
- Pearson's Chi-Square Test

Machine Learning
Supervised learning

- Types of Learning – Supervised Learning
- Getting started with Classification
- Types of Regression Techniques
- Classification vs Regression

Linear Regression

- Introduction to Linear Regression
- Implementing Linear Regression
- Univariate Linear Regression
- Multiple Linear Regression
- Python | Linear Regression using sklearn
- Linear Regression Using Tensorflow
- Linear Regression using PyTorch
- Pyspark | Linear regression using Apache MLlib
- Boston Housing Kaggle Challenge with Linear Regression

Polynomial Regression

- Polynomial Regression for Non-Linear Data
- Polynomial Regression using Turicreate

Logistic Regression

- Understanding Logistic Regression
- Implementing Logistic Regression
- Logistic Regression using Tensorflow
- Softmax Regression using TensorFlow
- Softmax Regression Using Keras

Naive Bayes

- Naive Bayes Classifiers
- Naive Bayes Scratch Implementation using Python
- Complement Naive Bayes (CNB) Algorithm
- Applying Multinomial Naive Bayes to NLP Problems

Support Vector

- Support Vector Machine Algorithm
- Support Vector Machines(SVMs) in Python
- SVM Hyperparameter Tuning using GridSearchCV
- Creating linear kernel SVM in Python
- Major Kernel Functions in Support Vector Machine (SVM)
- Using SVM to perform classification on a non-linear dataset

Decision Tree

- Implementing Decision tree
- Decision Tree Regression using sklearn

Random Forest

- Random Forest Regression in Python
- Random Forest Classifier using Scikit-learn
- Hyperparameters of Random Forest Classifier
- Voting Classifier using Sklearn
- Bagging classifier

K-nearest neighbor (KNN)

- K Nearest Neighbors with Python | ML
- Implementation of K-Nearest Neighbors from Scratch using Python
- K-nearest neighbor algorithm in Python
- Implementation of KNN classifier using Sklearn
- Imputation using the KNNimputer() Implementation of KNN using OpenCV

Deep Learning

- Introduction to Deep Learning
- Introduction to Artificial Neutral Networks
- Implementing Artificial Neural Network training process in Python
- A single neuron neural network in Python

Convolutional Neural Networks

- Introduction to Convolution Neural Network
- Introduction to Pooling Layer
- Introduction to Padding
- Types of padding in convolution layer
- Applying Convolutional Neural Network on mnist dataset

Recurrent Neural Networks

- Introduction to Recurrent Neural Network
- Recurrent Neural Networks Explanation
- seq2seq model
- Introduction to Long Short Term Memory
- Long Short Term Memory Networks Explanation
- Gated Recurrent Unit Networks(GAN)
- Text Generation using Gated Recurrent Unit Networks

GANs – Generative Adversarial Network

- Introduction to Generative Adversarial Network
- Generative Adversarial Networks (GANs)
- Use Cases of Generative Adversarial Networks
- Building a Generative Adversarial Network using Keras
- Modal Collapse in GANs

Natural Language Processing

- Introduction to Natural Language Processing
- Text Preprocessing in Python | Set – 1
- Text Preprocessing in Python | Set 2
- Removing stop words with NLTK in Python
- Tokenize text using NLTK in python
- How tokenizing text, sentence, words works
- Introduction to Stemming
- Stemming words with NLTK
- Lemmatization with NLTK
- Lemmatization with TextBlob
- How to get synonyms/antonyms from NLTK WordNet in Python?

Unsupervised Learning

- Types of Learning – Unsupervised Learning
- Clustering in Machine Learning
- Different Types of Clustering Algorithm
- K means Clustering – Introduction
- Elbow Method for optimal value of k in KMeans
- K-means++ Algorithm
- Analysis of test data using K-Means Clustering in Python
- Mini Batch K-means clustering algorithm
- Mean-Shift Clustering
- DBSCAN – Density based clustering
- Implementing DBSCAN algorithm using Sklearn
- Fuzzy Clustering
- Spectral Clustering
- OPTICS Clustering
- OPTICS Clustering Implementing using Sklearn
- Hierarchical clustering (Agglomerative and Divisive clustering)
- Implementing Agglomerative Clustering using Sklearn
- Gaussian Mixture Model

For Registration/ Customization of Course / Course Fees

Call / What's app on:	+91 8050123030
Duration:	90 Days
Mode of Training:	Online
Weekdays:	Monday-Friday
Weekends:	Saturday and Sunday

Student Review

Arvind Raju
From : Oman

I've taken up the Advance Python & Arcpy classes from this institute with trainer Mrs.Roselynn is very knowledgeable and teaches the course topics with great detail. Everything was easy to understand and I was always helped with doubts until it was completely rectified. I would definitely recommend this Institute to anyone wanting to learn Python or any of the other courses they offer.

Ullash Ghosh
From : Kolkatta

Excellent teaching of Advance Python programming by experienced trainer. Flexible timings. It was an awesome experience.

Jahir Hussain
From : Qatar

Its Helped me to identify clear,be able next steps towards resolving my own workplace conflict and issues.

Ayeesha H
From :Bangalore

Great knowledge given by the mentor, Best training institution. Mam has explained all the topics very clearly.

Student Review

Vishnu vg
From Kerala

My trainer, has a very good command over all the topics. She has explained each topic very clearly. We got a good understanding of all the concepts as she used to write programs daily for the real time scenarios. She make us practice during the classes. Overall I could say, you will be gaining good hands-on and understanding by end of the course

Eshawar Rao
From Hubli Dharwad

Excellent Faculty, Excellent Knowledge about subject, madam gives Attention towards every individual student, Madam is having enough Patience in clearing all individual doubts, Overall Excellent training centre to learn and to grow.

Siddhi Kanekar
From Pune

Best training institution. Mam has explained all the topics very clearly.
Thank you so much mam for being part of your institution.

Aghil Dev
From Orisa

I happy to be a student of rose mam, as she was always present to help. My classes were good and helped me in understanding the concept. Thanks rose mam

Gaurav Chauhan

Position: GIS Analyst
Company:
Carifer Technologies Private Limited
Chennai
Salary: 13 LPA

Harisha

Position: GIS Analyst
Company:
GVS Technosoft Pvt. Ltd
Salary: 10 LPA

Ankit Hemnani

Position: Software Engineer .Net
Company:
Celtic System Pvt.Ltd
Salary: 7.5 LPA

Harish Vijayakumar

Position: Project-Assosiate
Company:
Cognizant Technology Solutions India Private Limited
Salary: 12 LPA

Ezeal Tech Team

KIRAN B

Qualification: MBA
Position: Business Head
Experience: 18 Years

His extensive experience in Operations Management, Client Acquisition, HR & Recruitment, and working with startups, he has demonstrated a track record of success across multiple industries and geographies. Starting from an executive level, he progressed to management positions, where he implemented process improvements to enhance efficiency, increase revenue, and drive growth. His vast network of colleges and training centers has significantly contributed to the development of robust recruitment and training pipelines. Moreover, he has successfully engaged with diverse clients.

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NIKHIL S D

Qualification: BE Civil
Position: CAD Trainer (Civil)
Experience: 10 Years

Programing Skills: C,C++
2D And 3D Skills: AutoCad, 3D Max, Staad pro, Solid Works, Revit, Google Sketchup and ArcGIS CityEngine

Highly experienced CAD Civil Trainer with a demonstrated track record of success in delivering comprehensive training and instruction, specifically tailored for civil engineering applications. Committed to empowering learners with the necessary skills and knowledge to excel in their civil design and drafting projects.

RAMESH J

Qualification: BE Mech
Position: CAD CAM Trainer (Mech)
Experience: 6 Years

Programing Skills: C,C++,Python
2D And 3D Skills: AutoCad, Catia, Pro-e, Solid Edge, MatLab, Ansys, Solid Works,

Results-oriented CAD Mech Trainer with a decade of experience delivering exceptional training and instruction in 2D and 3D modeling software for mechanical engineering applications. Committed to equipping learners with the skills and knowledge needed to excel in mechanical design, simulation, and manufacturing.

ROSELEN S B

Qualification: MCA
Position: Programmer And Corporate Trainer
Experience: 12 Years

Programing Skills: Java, Python, AI, Machine Learning, Php, SQL, Full Stack
GIS Skill: Arcpy, ArcGIS JS API, ArcGIS Python API, PostGIS, Web AppBuilder, WebGIS

Highly experienced programming mentor with a strong background in various programming languages With over 12 years of training experience, has successfully mentored more than 3000 students, dedicated to helping aspiring programmers and professionals acquire the necessary skills and knowledge to excel in their programming careers.

KAVITA H

Qualification: MSc.IT

Position: Programing Trainer

Experience: 10 Years

Programing Skills: C, C++, Java, MSSQL, MYSQL Server, C# and good knowledge in Servlets, JSP, EJB Worked on J2EE 1.4 Application Server

Kavita is a seasoned programming mentor and trainer with a decade of experience specializing in Java Servlets and MySQL. She has a strong passion for teaching and guiding individuals in mastering these technologies. kavita's in-depth knowledge and practical experience in Java Servlets and MySQL make her an ideal mentor for aspiring programmers looking to excel in web development

ANKIT H

Qualification: MSc.Geoinformatics

Position: GIS Trainer

Experience: 6 Years

GIS Skills: Arc GIS, Arc GIS Pro, QGIS, IGIS, Fusion X, Auto CAD, MS Office, Google Earth, Bhuvan Portal, Geo-Server, Arcgis online, Microstation

Programing Skills: HTML, CSS, Java script, ArcGIS API for Java script, .Net, Python

Ankit is a highly skilled GIS trainer. Has experience in ArcGIS, QGIS, PostGIS, remote sensing, and network analysis. His expertise lies in the field of spatial data analysis and geospatial technologies. He is passionate about sharing his knowledge and helping individuals develop proficiency in GIS applications for various industries.

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