



Empowering Business Globally



REGISTER NOW !

Trainers have
13+ years experience

CONTACT US NOW
©9042090708

www.litztech.in

Artificial Intelligence Syllabus (Total Duration-80hrs)

Module 1: Introduction to Data Science (Duration-1hr)

- What is Data Science?
- What is Machine Learning?
- What is Deep Learning?
- What is AI?
- Data Analytics & it's types

Module 2: Introduction to Python (Duration-1hr)

- What is Python?
- Why Python?
- Installing Python
- Python IDEs
- Jupyter Notebook Overview

Module 3: Python Basics (Duration-5hrs)

- Python Basic Data types
- Lists
- Slicing
- IF statements
- Loops
- Dictionaries
- Tuples
- Functions
- Array
- Selection by position & Labels

Module 4: Python Packages (Duration-2hrs)

- Pandas
- Numpy
- Sci-kit Learn
- Mat-plot library

Module 5: Importing Data (Duration-1hr)

- Reading CSV files
- Saving in Python data
- Loading Python data objects
- Writing data to csv file

Module 6: Manipulating Data (Duration-1hr)

- Selecting rows/observations
- Rounding Number
- Selecting columns/fields
- Merging data
- Data aggregation
- Data munging techniques

Module 7: Statistics Basics (Duration-1 1hrs)

- Central Tendency
 - Mean
- Median
- Mode
- Skewness
- Normal Distribution
- Probability Basics
- What does mean by probability?
- Types of Probability • ODDS Ratio?
- Standard Deviation
- Data deviation & distribution
- Variance
- Bias variance Trade off
- Underfitting
- Overfitting
- Distance metrics
- Euclidean Distance
- Manhattan Distance
- Outlier analysis • What is an Outlier?
- Inter Quartile Range
- Box & whisker plot
- Upper Whisker
- Lower Whisker
- Scatter plot
- Cook's Distance
- Missing Value treatment
- What is a NA?
- Central Imputation
- KNN imputation
- Dummification
- Correlation
- Pearson correlation
- ositive& Negative correlation

Module 8: Error Metrics (Duration-3hrs)

- Classification
- Confusion Matrix
- Precision
- Recall
- Specificity
- F1 Score
- Regression
- MSE
- RMSE • MAPE

Module 9: Machine Learning Supervised Learning (Duration-6hrs)

- Linear Regression
- Linear Equation
- Slope
- Intercept
- R square value
- Logistic regression
- ODDS ratio
- Probability of success
- Probability of failure Bias Variance Tradeoff
- ROC curve
- Bias Variance Tradeoff

Unsupervised Learning (Duration-4hrs)

- K-Means
- K-Means ++
- Hierarchical Clustering

SVM (Duration-2hrs)

- Support Vectors
- Hyperplanes
- 2-D Case
- Linear Hyperplane

SVM Kernel (Duration-2hrs)

- Linear
- Radial
- polynomial

Other Machine Learning algorithms (Duration-10hrs)

- K – Nearest Neighbour

- Naïve Bayes Classifier
- Decision Tree – CART
- Decision Tree – C50
- Random Forest

Module 10: ARTIFICIAL INTELLIGENCE AI Introduction (Duration-9hrs)

- Perceptron
- Multi-Layer perceptron
- Markov Decision Process
- Logical Agent & First Order Logic
- AL Applications

Module 11: Deep Learning Algorithms (Duration-10hrs)

CNN – Convolutional Neural Network

RNN – Recurrent Neural Network

ANN – Artificial Neural Network

Introduction to NLP (Duration-5hrs)

- Text Pre-processing
- Noise Removal
- Lexicon Normalization
- Lemmatization
- Stemming
- Object Standardization

Text to Features (Feature Engineering) (Duration-5hrs)

- Syntactical Parsing
- Dependency Grammar
- Part of Speech Tagging
- Entity Parsing
- Named Entity Recognition
- Topic Modelling
- N-Grams
- TF – IDF
- Frequency / Density Features
- Word Embedding's

Tasks of NLP (Duration-2hrs)

- Text Classification
- Text Matching
- Levenshtein Distance

- Phonetic Matching
- Flexible String Matching

LitizTech