Learnbay

DATA SCIENCE AND AI

For Freshers

FINAL YEAR PROJECT ASSISTANCE

6 MONTHS INTERNSHIP CERTIFICATE

IBM CERTIFIED

www.learnbay.co

Program overview

Industrial Training

Live Facultyled Online Interactive Training from Industrial Experts
270+ hrsofInteractive Classes

8 Industrial Projects

2 from Data Analytics
3 from ML
1 from NLP
2 from Computer Vision

IBM Certification

Get Certified from IBM in Data Science and AI Industry Accredited Program

Final year project mentorship

Learn Python from scratch Special classes for Non programming background students.

Program overview

Flexible EMI based payment options

Flexibility to attend multiple batches, multiple times as per your convenience from different trainers.

Job Assistance & Referrals

Attain classes from anywhere with access to study material and classroom recordings

How the Internship works?

Learnbay offers you to take part in its various projects of different domains, so you can be certified for internship in the project you select to work on. Here you can Learn the project and Earn your internship in it.

Get 6 months Internship Certificate in Data Science and Artificial Intelligence

Program Details

COURSE PREREQUISITE

Prior knowledge of **programming/coding** is not mandatory. Just the urge to learn programming and basic ideas about advanced math is enough.

PROGRAM ELIGIBILITY

This program is best suited for fresh graduates.
Academics: **BBA, BCA, BE, B.Tech, M.Tech, MCA, MBA**

KEY FEATURES

- 6 months Internship Certificate
- Dedicated Placement Cell | 100% Guaranteed Interview calls
- Globally Recognised **Certification from IBM**

JOB ROLES TO TARGET

Get equipped with the industry relevant skills and aim for job roles like Data Scientist, Data Analyst, Data Engineer, Tableau Developer etc.

Click below

Check Eligibility

Certificate

6 Months Internship Certificate

- Enhance your resume with a 6 months internship certificate
- Master the latest technology tools during your internship training

Program Fee & Financing

Scholarship

Scholarships are awarded based on profile review. Eligible candidates can avail upto 25% scholarship on desired courses. Click the button below to apply.

Click below

Check Scholarship Eligibility

Financing as low as

Rs. 4,917/month

No Cost EMI

Razorpay

LIQUILOANS

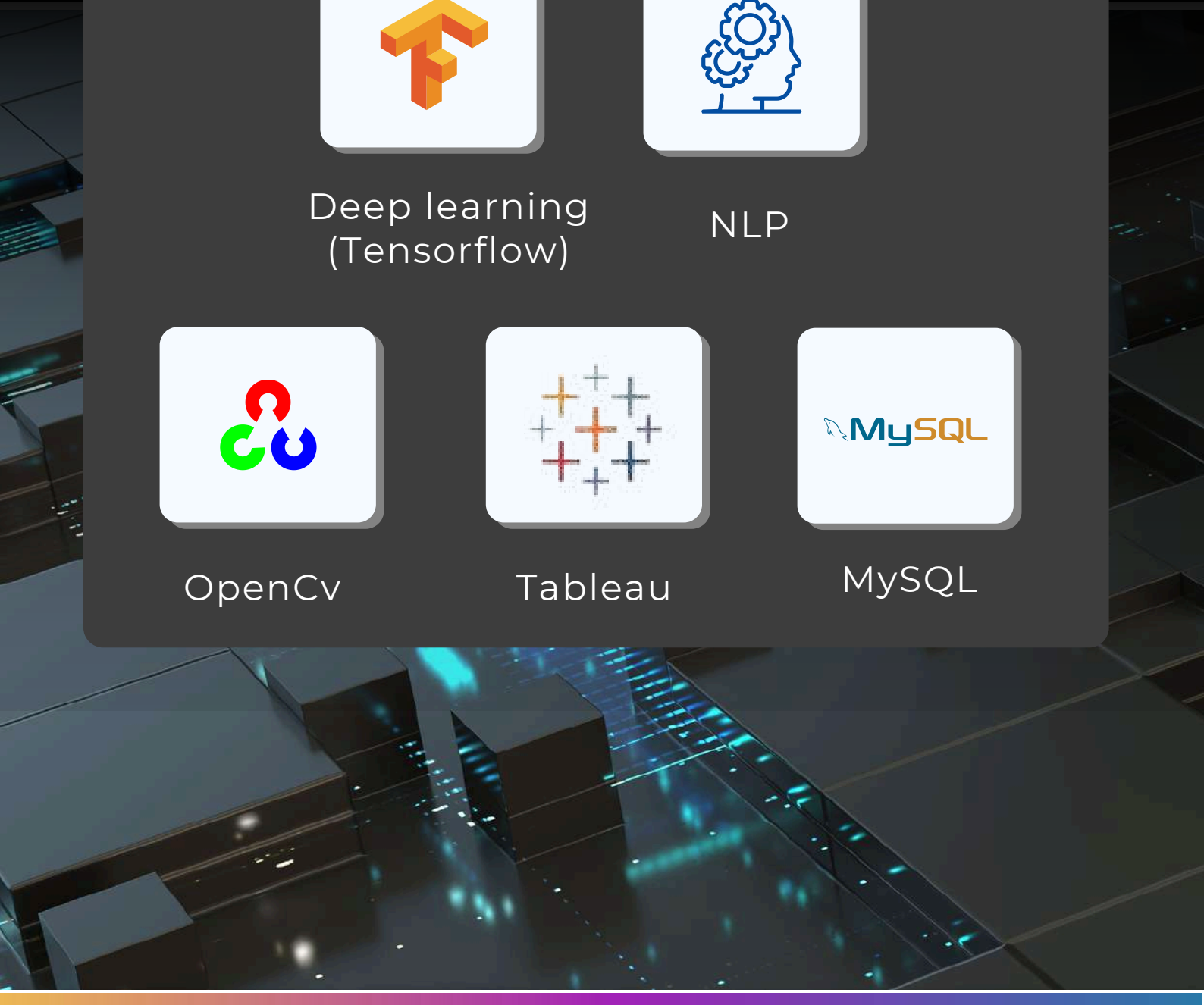
PropelId

ShopSe

Program Fee

Rs. 75,000/- +18% GST

Modules & Tools



Python

Statistics

Machine Learning

Deep learning (Tensorflow)

NLP

OpenCv

Tableau

MySQL

Career Services

Get 1 Year of Job and Placement Support

Unleash your career potential with 1 year of unlimited job access, interview support, and profile review.

1 Mock Interviews with Industry Experts

Master the art of data science & AI and stay ahead of the curve with mockups and industry insights

Resume Building Session

Craft a powerful resume showcasing your expertise in software development to stand out from the competition

4 Interview Calls

Receive 4 interview calls from a diverse pool of interested employers/recruiters.

Project Innovation Lab

Learnbay's Project Innovation Lab replicates industry like environment for real time projects. With our **ProjectLab,** you gain real proof of hands-on experience by having your project certified by the industry.

In our ProjectLab, you work like a data scientist with dedicated project mentors from industry and get certified on capstone project.

450+
Hiring Partners

PUNE

1-1 Doubt Session

HYDERABAD

Capstone Project Certificate from IBM

35k
Trusted Learners

DELHI

BENGALURU

Project Innovation Labs Across India

Program Syllabus

Milestone 01

Core Python + Numpy + Pandas + Matplotlib + Seaborn

Milestone 02

Statistics + Machine Learning Algorithms + Internship Projects

Milestone 03

AI Modules (Deep Learning, NLP, Computer Vision) + Final Year Project

Milestone 03

Structured Query Language (SQL)+ Tableau

Program Syllabus

Python 30 Hours

1. Programming Basics & Environment Setup

- Installing Anaconda, Anaconda Basics and Introduction
- Get familiar with version control, Git and GitHub.
- Basic Github Commands.
- Introduction to Jupyter Notebook environment. Basics Jupyter notebook Commands.
- Programming language basics.

2. Python Programming Overview

- Python Overview
- Python 2.7 vs Python 3
- Writing your First Python Program Lines and Indentation, Python Identifiers
- Various Operators and Operators Precedence
- Getting input from User,Comments,Multi line Comments.

3. Strings, Decisions And Loop Control

- Working With Numbers, Booleans
- and Strings,String types and formatting, String operations
- Simple if Statement, if-else Statement if-elif Statement.
- Introduction to while Loops.
- Introduction to for Loops,Using continue and break.

Class hands-on :

6 programs/coding exercise on string, loop and conditions in classroom

Program Syllabus

Prep-work

Python 30 Hours

4. Python Data Types

- List,Tuples,Dictionaries
- Python Lists,Tuples,Dictionaries Accessing Values,Basic Operations Indexing, Slicing, and Matrixes
- Built-in Functions & Methods
- Exercises on List,Tuples And Dictionary

Class hands-on :

- *Program to convert tuple to dictionary*
- *Remove Duplicate from Lists*
- *Python program to reverse a tuple*
- *Program to add all elements in list.*
- *+ 3 more programs to be covered in class*

5. Functions And Modules

- Introduction To Functions – Why Defining Functions
- Calling Functions
- Functions With Multiple Arguments. Anonymous Functions - Lambda
- Using Built-In Modules,User-Defined Modules,Module Namespaces, Iterators And Generators

Class hands-on :

8+ Programs to be covered in class from functions, Lambda, modules, Generators and Packages.

Program Syllabus

Prep-work

Python — 30 Hours

6. File I/O And Exceptional Handling and Regular Expression

- Introduction to Numpy. Array
- Creation,Printing Arrays, Basic Operation - Indexing,Slicing and Iterating, Shape Manipulation - Changing shape,stacking and spliting of array
- Vector stacking, Broadcasting with Numpy, Numpy for Statistical Operation.
- Pandas : Introduction to Pandas
- Importing data into Python
- Pandas Data Frames,Indexing Data Frames ,Basic Operations With Data frame, Renaming Columns, Subletting and filtering a data frame.

7. Data Visualisation using Python: Matplotlib

- Introduction To Functions – Why Defining Functions
- Calling Functions
- Functions With Multiple Arguments. Anonymous Functions - Lambda
- Using Built-In Modules,User-Defined Modules,Module Namespaces, Iterators And Generators

8. Data Visualisation using Python: Matplotlib

- Matplotlib: Introduction,plot(),Controlling Line Properties,Subplot with Functional Method, MUltiple Plot, Working withMultiple Figures,Histograms

Program Syllabus

Prep-work

Python 30 Hours

2 Case Study on Numpy, Pandas , Matplotlib 1 Case Study on Pandas

Assessment Test in Python : 2 hour of Assesment Test in Python(Coding & Objective Questions

Assignment 1 (Week 1):
10 Coding exercises on Python Basics - Variables, Operators, Strings, Loops
Assignment 2 (Week 2):
10 Python Programs and practice set on List,Tuples ,Dictionaries & matrices operations
Assignment 3 (Week 3):
10 Coding exercises on Functions, File And Regular Expression
Assignment 4 (Week 4):
15 Programs and Practice set Questions on Numpy and Pandas
Assignment 5 (Week 5):
2 Case Studies using Numpy Pandas and Matplotlib.

Tools covered | NumPy pandas matplotlib

Program Syllabus

Statistics 20 Hours

1. Fundamentals of Math and Probability

- Basic understanding of linear algebra, Matrics, vectors, Addition and, Multiplication of matrics, Fundamentals of Probability, Distributed function and cumulative distributed function.

Class hands-on :

- *Problem solving using R for vector manupulation*
- *Problem solving for probability assignments*

2. Descriptive Statistics

- Describe or sumarise a set of data Measure of central tendency and measure of dispersion.
- The mean,median,mode, curtosis and skewness
- Computing Standard deviation and Variance,Types of distribution.

Class hands-on :

- *5 Point summary BoxPlot*
- *Histogram and Bar Chart*
- *Exploratory analytics R Methods*

3. Inferential Statistics

- What is inferential statistics
- Different types of Sampling techniques Central Limit Theorem
- Point estimate and Interval estimate Creating confidence interval for population parameter
- Characteristics of Z-distribution and T- Distribution, Basics of Hypothesis Testing, Type of test and rejection region, Type of errors in Hypothesis resting

contd.,

Program Syllabus

Statistics 20 Hours

- Type-I error and Type-II errors
- P-Value and Z-Score Method
- T-Test, Analysis of variance(ANOVA) and Analysis of Co variance(ANCOVA) Regression analysis in ANOVA

Class hands-on :

- *Problem solving for C.L.T*
- *Problem solving Hypothesis Testing Problem solving for T-test, Z-score test Case study and model run for ANOVA, ANCOVA*

4. Hypothesis Testing

- Hypothesis Testing
- Basics of Hypothesis Testing
- Type of test and Rejection Region
- Type o errors-Type 1 Errors,Type 2 Errors,P value method,Z score Method. The Chi-Square Test of Independence Regression
- Factorial Analysis of Variance
- Pearson Correlation Coefficients in Depth, Statistical Significance, Effect Size, and Confidence Intervals

5. Data Processing & Exploratory Data Analysis

- Introduction to Data Cleaning
- Data Pre-processing
- What is Data Wrangling?
- How to Restructure the data?
- What is Data Integration?
- Data Transformation
- **EDA** : Finding and Dealing with Missing Values.What are Outliers? Using Z-scores to Find Outliers. Introduction to Bivariate Analysis,Scatter Plots and Heatmaps, Multivariate Analysis

Program Syllabus

Machine Learning

30 Hours

Introduction To Machine Learning

- What is Machine Learning? Introduction to Supervised and Unsupervised Learning
- Introduction to SKLEARN (Classification, Regression, Clustering, Dimensionality reduction, Model selection, Preprocessing)
- What is Reinforcement Learning? Machine Learning applications Difference between Machine Learning and Deep Learning

1. Supervised Learning

- Support Vector Machines
- Linear regression
- Logistic regression
- Naive Bayes
- Linear discriminant analysis
- Decision tree
- k-nearest neighbor algorithm Neural Networks (Multilayer perceptron)
- Similarity learning

2. Linear Regression

- Introduction to Linear Regression
- Linear Regression with Multiple Variables Disadvantage of Linear Models Interpretation of Model Outputs Understanding Covariance and Colinearity
- Understanding Heteroscedasticity

Case Study:

Application of Linear Regression for Housing Price Prediction

Program Syllabus

Machine Learning 30 Hours

3. Logistic Regression

- Introduction to Logistic Regression.
- Why Logistic Regression .
- Introduce the notion of classification
- Cost function for logistic regression
- Application of logistic regression to multi-class classification.
- Confusion Matrix, Odd's Ratio And ROC Curve

4. Decision Trees

- Decision Tree – data set
- How to build decision tree? Understanding Kart Model Classification Rules- Overfitting Problem
- Stopping Criteria And Pruning
- How to Find final size of Trees? Model A decision Tree, Naive Bayes Random Forests and Support Vector Machines
- Interpretation of Model Outputs

Case Study:

- *1 Business Case Study for Kart Model*
- *2 Business Case Study for Random Forest*
- *3 Business Case Study for SVM*

Program Syllabus

Machine Learning

30 Hours

5. Unsupervised Learning

- Hierarchical Clustering
- k-Means algorithm for clustering – groupings of unlabeled data points. Principal Component Analysis(PCA)- Data
- Independent components analysis(ICA) Anomaly Detection
- Recommender System-collaborative filtering algorithm

6. Natural language Processing

- Introduction to natural Language Processing(NLP).
- Word Frequency Algorithms for NLP Sentiment Analysis

Case Study:

Twitter data analysis using NLP

Program Syllabus

Artificial Intelligence Modules — 24 Hours

1. Introduction to Artificial

- Introduction to Deep Learning
- Understaing Neural Network Model Installing TensorFlow
- Simple Computation ,Contants And Variables
- Types of file formats in TensorFlow Creatting A Graph – Graph Visualization Creating a Model – Logistic Regression Model Building using tensor flow TensorFlow Classification Examples

2. Introduction to Tensor Flow

- Installing TensorFlow
- Simple Computation ,Contants And Variables
- Types of file formats in TensorFlow Creatting A Graph - Graph
- Visualization
- Creating a Model - Logistic Regression Model Building
- TensorFlow Classification Examples

3. Understanding Neural Networks With Tensor Flow

- Basic Neural Network
- Single Hidden Layer Model
- Multiple Hidden Layer Model Backpropagation – Learning Algorithm and visual representation
- Understand Backpropagation – Using Neural
- Network Example
- TensorBoard
- *Project on backpropagation*

Program Syllabus

Artificial Intelligence Modules — 24 Hours

4. Natural Language Processing (Introduction to NLP & Text Analytics)

- Introduction to Text Analytics Introduction to NLP
- What is Natural Language Processing?
- What Can Developers Use NLP
- Algorithms For?
- NLP Libraries, Need of Textual Analytics, Applications of Natural Language Procession
- Word Frequency Algorithms for NLP Sentiment Analysis

5. Natural Language Processing (Text Pre Processing Techniques)

- Need of Pre-Processing
- Various methods to Process the Text data
- Tokenization, Challenges in Tokenization
- Stopping ,Stop Word Removal Stemming - Errors in Stemming
- Types of Stemming Algorithms - Table lookup Approach ,N-Gram Stemmers

5. Open CV (Introduction to Computer Vision)

- Introduction to computer Vision Computer Vision overview
- Historical Perspective
- Introduction to the four Rs of Computer Vision
- Image Processing
- Histogram equalization, Thresholding
- and Convolution. Sharpening and edge
- detection. Morphological
- tranformations, Image pyramid

Program Syllabus

SQL & Tableau — 16 Hours

1. RDBMS And SQL Operations :

- Introduction To RDBMS
- Single Table Queries - SELECT,WHERE,ORDER
- BY,Distinct,And ,OR
- Multiple Table Queries: INNER, SELF, CROSS, and OUTER, Join, Left Join, Right Join, Full Join, Union
- Advance SQL Operations:
- Data Aggregations and summarizing the data
- Ranking Functions

2. NoSQL Databases

- Topics - What is HBase?
- HBase Architecture, HBase Components,
- Storage Model of HBase,
- HBase vs RDBMS
- Introduction to Mongo DB, CRUD Advantages of MongoDB over RDBMS Use cases

3. Programming with SQL

- Mathematical Functions Variables
- Conditional Logic
- Loops
- Custom Functions
- Grouping and Ordering Partitioning
- Filtering Data
- Subqueries

Program Syllabus

SQL & Tableau — 16 Hours

4. Introduction to Tableau

- Connecting to data source
- Creating dashboard pages
- How to create calculated columns Different charts

Class hands-on :

- *Hands on on connecting data source and data cleansing*
- *Hands on various charts*

5. Dashboard and Stories :

- Working in Views with Dashboards and Stories
- Working with Sheets
- Fitting Sheets
- Legends and Quick Filters
- Tiled and Floating Layout
- Floating Objects

6. Mapping :

- Coordinate points
- Plotting Latitude and Longitude
- Custom Geocoding
- Polygon Maps
- WMS and Background Image
- Sorting and grouping
- Working with sets, set action
- Filters: Ways to filter, Interactive Filters Forecasting and Clustering

The **IBM** exam will be conducted for all the modules after completion of the course

Real-time Projects

J.P.Morgan

12 hours

Learn and develop classification techniques for the digital transformation of banking

JPMorgan offers tax-friendly insurance choices. You can help them forecast insurance premiums. Targeted marketing using your Random Forest Algorithm skills can help obtain better premium values.

python pandas scikit-learn

NETFLIX

17 hours

Building a content recommendation model on the basis of regional viewer categorization

Netflix is a global entertainment video streaming site. They offer content in various regional languages. Build a local recommendation engine for Netflix customers residing in south Bangalore on their weekend and weekday activities, utilizing NLP.

NumPy SQL jupyter

OLA

18 hours

Reduction of waiting time via a highly precise forecasting model

Make a demand forecasting model based on specific time period rider demands. Such a model will help both riders and cab drivers to ensure the least possible waiting time. You can include measures like latitude and longitude identification.

python TensorFlow APACHE Spark

أرامكو السعودية saudi aramco

14 hours

Understanding in-depth about logging while drilling (LWD) technique

Saudi Aramco company is working on the development of high-efficiency drilling models. Use the bright sides of big data analytics to identify the most cost- effective and highly productive drilling sites.

hadoop matplotlib aws

Real-time Projects

IBM

19 hours

Career progression planning of employees with workforce defections and efficiency

IBM intends to boost its HR department by identifying employees' masked inconsistency. They need models to identify the graphical variations in their 14000+ employees' performances. Help them build models with your regressions and other ML abilities.

python pandas scikit learn

SWIGGY

21 hours

Descriptive study of trends and irregularities with prediction analysis for conversion

Swiggy seeks a broad marketing campaign. But they need automated keyword generation tools & proper message preparation and delivery of the same to the right audience at the right time. Help them with text analytics and NLP-based keyword research.

TensorFlow SQL jupyter

BMW

17 hours

Forecasting future sales with trends and price maximization

BMW customers can sell old vehicles, but rivals provide superior resale prices. BMW's data science-powered software will deliver the greatest market value for used vehicles based on Km travelled, daily price changes, production dates, etc. Such tasks build analytical abilities.

Keras GitHub scikit learn

SAMSUNG

13 hours

Understanding covid-19 cases and fatality rate by time series forecasting

Samsung will launch a new healthcare app soon. The key goal of this app is an accurate human activity tracking and providing relevant health-related recommendations. Continuous analysis with of a massive amount of mobile data is required for such an app.

python matplotlib Azure

Contact Us

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