



Machine Learning Certification Training

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“AI and ML are expected to generate up to \$1.4–2.6 trillion in global marketing and sales – McKinsey”

About the Program

Our Machine Learning course will help you master the skills required to become an expert in this domain. Master skills such as Python, ML algorithms, statistics, supervised and unsupervised learning, etc. to become a successful professional in this popular technology. Intellipaat’s Machine Learning certification training comes with 24/7 support, multiple assignments, and project work to help you gain real-world exposure.

About Intellipaat

Intellipaat is one of the leading e-learning training providers with more than 600,000 learners across 53+ countries. We are on a mission to democratize education as we believe that everyone has the right to quality education.

Our courses are delivered by subject matter experts from top MNCs, and our world-class pedagogy enables learners to quickly learn difficult topics in no time. Our 24/7 technical support and career services will help them jump-start their careers in their dream companies.

Key Features



32 HRS INSTRUCTOR-LED TRAINING



32 HRS SELF-PACED TRAINING



64 HRS REAL-TIME PROJECT WORK



LIFETIME ACCESS



24/7 TECHNICAL SUPPORT



INDUSTRY-RECOGNIZED CERTIFICATION



JOB ASSISTANCE THROUGH 80+ CORPORATE TIE-UPS



FLEXIBLE SCHEDULING

Career Support



SESSIONS WITH INDUSTRY MENTORS

Attend sessions from top industry experts and get guidance on how to boost your career growth



MOCK INTERVIEWS

Mock interviews to make you prepare for cracking interviews by top employers



GUARANTEED INTERVIEWS & JOB SUPPORT

Get interviewed by our 400+ hiring partners



RESUME PREPARATION

Get assistance in creating a world-class resume from our career services team



Why take up this course?

- There are over 7,332 ML jobs available in India alone as per LinkedIn.
- Over 64,000 job openings are available for Machine Learning professionals in the USA, according to LinkedIn.
- As per Indeed, the average income of Machine Learning Engineers is US\$140,579 per annum in the United States.
- The average annual income of Machine Learning Engineers in India is ₹685,100 (PayScale).
- The growth rate for ML jobs is about 350%!
- Automation is the trending face of technology.

In the world we live in today, ML has proved itself to be among the hottest and demanding technologies. Hence, by leveraging Intellipaat's Machine Learning course, you will be exposed to numerous high-paying job opportunities.

Who should take up this course?

Our ML program is curated and designed for:

- Professionals working in the domains of Data Science, Analytics, and BI
- Professionals employed in fields of search engines and e-commerce
- Professionals seeking a career change
- Undergraduates and freshers

Program Curriculum

Machine Learning Course Content

1. INTRODUCTION TO MACHINE LEARNING

1.1 Need of Machine Learning

1.2 Introduction to Machine Learning

1.3 Types of Machine Learning, such as supervised, unsupervised, and reinforcement learning, Machine Learning with Python, and the applications of Machine Learning

2. SUPERVISED LEARNING & LINEAR REGRESSION

2.1 Introduction to supervised learning and the types of supervised learning, such as regression and classification

2.2 Introduction to regression

2.3 Simple linear regression

2.4 Multiple linear regression and assumptions in linear regression

2.5 Math behind linear regression

Hands-on Exercise:

1. Implementing linear regression from scratch with Python
2. Using Python library Scikit-Learn to perform simple linear regression and multiple linear regression
3. Implementing train–test split and predicting the values on the test set

3. CLASSIFICATION & LOGISTIC REGRESSION

3.1 Introduction to classification

3.2 Linear regression vs logistic regression

3.3 Math behind logistic regression, detailed formulas, the logit function and odds, confusion matrix and accuracy, true positive rate, false positive rate, and threshold evaluation with ROCR

Hands-on Exercise:

1. Implementing logistic regression from scratch with Python
2. Using Python library Scikit-Learn to perform simple logistic regression and multiple logistic regression
3. Building a confusion matrix to find out accuracy, true positive rate, and false positive rate

4. DECISION TREE & RANDOM FOREST

4.1 Introduction to tree-based classification

4.2 Understanding a decision tree, impurity function, entropy, and understanding the concept of information gain for the right split of node

4.3 Understanding the concepts of information gain, impurity function, Gini index, overfitting, pruning, pre-pruning, post-pruning, and cost-complexity pruning

4.4 Introduction to ensemble techniques, bagging, and random forests and finding out the right number of trees required in a random forest

Hands-on Exercise:

1. Implementing a decision tree from scratch in Python
2. Using Python library Scikit-Learn to build a decision tree and a random forest
3. Visualizing the tree and changing the hyper-parameters in the random forest

5. NAÏVE BAYES & SUPPORT VECTOR MACHINES (SELF-PACED)

5.1 Introduction to probabilistic classifiers

5.2 Understanding Naïve Bayes and math behind the Bayes theorem

5.3 Understanding a support vector machine (SVM)

5.4 Kernel functions in SVM and math behind SVM

Hands-on Exercise:

1. Using Python library Scikit-Learn to build a Naïve Bayes classifier and a support vector classifier

6. UNSUPERVISED LEARNING

6.1 Types of unsupervised learning, such as clustering and dimensionality reduction, and the types of clustering

6.2 Introduction to k-means clustering

6.3 Math behind k-means

6.4 Dimensionality reduction with PCA

Hands-on Exercise:

1. Using Python library Scikit-Learn to implement k-means clustering
2. Implementing PCA (principal component analysis) on top of a dataset

7. NATURAL LANGUAGE PROCESSING & TEXT MINING (SELF-PACED)

7.1 Introduction to Natural Language Processing (NLP)

7.2 Introduction to text mining

7.3 Importance and applications of text mining

7.4 How NLP works with text mining

7.5 Writing and reading to word files

7.6 Language Toolkit (NLTK) environment

7.7 Text mining: Its cleaning, pre-processing, and text classification

Hands-on Exercise:

1. Learning Natural Language Toolkit and NLTK Corpora
2. Reading and writing .txt files from/to a local drive
3. Reading and writing .docx files from/to a local drive

8. INTRODUCTION TO DEEP LEARNING

8.1 Introduction to Deep Learning with neural networks

8.2 Biological neural networks vs artificial neural networks

8.3 Understanding perception learning algorithm, introduction to Deep Learning frameworks, and TensorFlow constants, variables, and place-holders

9. TIME SERIES ANALYSIS (SELF-PACED)

9.1 What is time series? Its techniques and applications

9.2 Time series components

9.3 Moving average, smoothing techniques, and exponential smoothing

9.4 Univariate time series models

9.5 Multivariate time series analysis

9.6 ARIMA model and time series in Python

9.7 Sentiment analysis in Python (Twitter sentiment analysis) and text analysis

Hands-on Exercise:

1. Analyzing time series data
2. The sequence of measurements that follow a non-random order to recognize the nature of the phenomenon
3. Forecasting the future values in the series

Project Work

Machine Learning Projects

Analyzing the Trends of COVID-19 with Python

In this project, you will be using Pandas to accumulate data from multiple data files, Plotly to create interactive visualizations, and Facebook's Prophet library to make time series models, and visualizing the prediction by combining these technologies.

Customer Churn Classification

This project will help you get more familiar with Machine Learning algorithms. You will be manipulating data to gain meaningful insights, visualizing data to figure out trends and patterns among different factors, and implementing algorithms such as linear regression, decision trees, and Naïve Bayes.

Creating a Recommendation System for Movies

You will be creating a recommendation system for movies by working with rating prediction, item prediction, user-based methods in k-nearest neighbor, matrix factorization, decomposition of singular value, collaboration filtering, business variables overview, etc. Two approaches you will use here are memory-based and model-based.

Case Study 1 - Decision Tree

Conducting this case study will help you understand the structure of a dataset (PIMA Indians Diabetes database) and create a decision tree model based on it by making use of Scikit-Learn.

Case Study 2 - Insurance Cost Prediction (Linear Regression)

In this case study, you will understand the structure of a medical insurance dataset, implement both simple and multiple linear regressions, and predict values for the insurance cost.

Case Study 3 - Diabetes Classification (Logistic Regression)

Through this case study, you will come to understand the structure of a dataset (PIMA Indians Diabetes dataset), implement multiple logistic regressions and classify, fit your model on the test and train data for prediction, evaluate your model using confusion matrix, and then visualize it.

Case Study 4 - Random Forest

You will be creating a model that would help in classifications of patients in the following ways: 'is normal,' 'is suspected to have a disease,' or 'in actuality has the disease' with the help of the Cardiocography dataset.

Case Study 5 - Principal Component Analysis (PCA)

As part of the case study, you will read the sample Iris dataset. You will use PCA to figure out the number of principal features and reduce the number of features. You will have to train and test the random forest classifier algorithm to check the model performance. Find the optimal number of dimensions that will give good quality results and predict accurately.

Case Study 6 - K-means Clustering

This case study involves data analysis, column extraction from the dataset, data visualization, using the elbow method to find out the appropriate number of groups or clusters for the data to be segmented, using k-means clustering, segmenting the data into k groups, visualizing a scatter plot of clusters, and many more.

Certification

After the completion of the course, you will get a certificate from IntelliPaat.



Success Stories



Kevin K Wada

Thank you very much for your top-class service. A special mention should be made for your patience in listening to my queries and giving me a solution, which was exactly what I was looking for. I am giving you a 10 on 10!



Sampson Basoah

The Intellipaate team helped me in selecting the perfect course that suits my profile. The whole course was practically oriented, and the trainers were always ready to answer any question. I found this course to be impactful. Thank you.



Rich Baker

This Machine Learning with Python course was very comprehensive, well-planned, extremely organized, and elaborate. Besides, the assignments and projects that had to be solved after the program really helped in testing my skills and knowledge acquired.



Vishal Pentakota

The best part of this online course was the series of hands-on demonstrations the trainer performed. Not only did he explain each concept theoretically, but he also implemented all those concepts practically. Great job! A must go for beginners.



Shreyashkumar Limbhetwala

I want to talk about the rich LMS that Intellipaate's Machine Learning training offered. The extensive set of PPTs, PDFs, and other related course material were of the highest quality, and due to this, my learning with Intellipaate was excellent. I could clear the certification in the first attempt.

CONTACT US

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