Online Machine Learning Training
Learn Machine Learning from scratch and take the first step towards AI
Duration: 6 weeks | Certified Training

About the 'Machine Learning' Training

Machine Learning is a 6-week online training program which will give you a comprehensive introduction to the world of Machine Learning. In this training program, you will learn Python programming, steps involved in ML life cycle, visualization techniques for data analysis, and various Machine Learning algorithms. You will learn through video tutorials. For a great hands-on learning experience, this training program is packed with assignments, assessment tests, quizzes, and practice exercises. At the end of this training program, you will have a solid understanding of Machine Learning techniques and will be able to build end-to-end predictive models. For doubt clearing, you can post your queries in the forum and get answers within 24 hours.

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1. Introduction to Machine Learning
Understand the basics and applications of Machine Learning.

1.1. Getting started with Machine Learning

2. Python for Machine Learning
Learn basics of Python programming, data types in Python and how to work with DataFrames.

2.1. Introduction to Python
2.2. Setting Up System
2.3. Operators in Python
2.4. Data types in Python
2.5. Conditional Statements
2.6. Looping Constructs
2.7. Functions in Python
2.8. Data Structures in Python
2.9. Standard Libraries
2.10. Reading CSV files in Python
2.11. Working with Dataframes

3. Machine Learning Life Cycle
Learn steps to build Machine Learning models and understand various visualization techniques.

3.1. Introduction to Predictive Modeling
3.2. Understanding Hypothesis Generation

3.3. Data Extraction
3.4. Understanding Data Exploration
3.5. Reading Data in Python
3.6. Variable Identification
3.7. Univariate Analysis
3.8. Bivariate Analysis
3.9. Missing Values and Outlier Treatment
3.10. Variable Transformation
3.11. Basics of Model Building

4. Data Exploration and Manipulation
Learn data exploration and manipulation using univariate and bivariate analysis.

4.1. Problem Statement and Univariate Analysis
4.2. Data Manipulation and Bivariate Analysis

5. Build Your First Model
Learn to prepare a dataset and build your first model for regression and classification problem.

5.1. Introduction and Overview
5.2. Preparing the Dataset
5.3. Building a Regression Model
5.4. Building a Classification Model

6. Evaluation Metrics
Learn how to evaluate metrics for classification and regression task.

6.1. Introduction to Evaluation Metrics
6.2. Evaluation Metrics for Classification Task
6.3. Evaluation Metrics for Regression Task

7. k-NN
Learn how to build a kNN model and understand multiple distance metrics.

7.1. Building a kNN model
7.2. Introduction to sklearn
7.3. Implementing kNN Algorithm

8. Selecting The Right Model
Learn how to visualize overfitting and underfitting using kNN and understand various validation techniques.

8.1. Overfitting and Underfitting
8.2. Different Validation Techniques
8.3. Bias Variance Tradeoff

9. Linear Regression

Learn how to build and implement linear regression.

9.1. Introduction to Linear Model
9.2. Cost Function and Gradient Descent
9.3. Building a Linear Regression

10. Logistic Regression

Learn how to build and implement logistic regression.

10.1. Building a Logistic Regression Model
10.2. Multiclass Using Logistic Regression

11. Decision Trees

Understand how the decision tree algorithm works and learn about the different techniques used for splitting. Build a decision tree model.

11.1. Basics of Decision Tree
11.2. Selecting the Best Split Point
11.3. Building a Decision Tree Model

12. Feature Engineering

Perform feature engineering for numerical, categorical, and date-time based features.

12.1. Introduction to Feature Engineering
12.2. Feature Preprocessing
12.3. Feature Generation
12.4. Feature Engineering with Date-Time Variables
12.5. Automated Feature Engineering

13. Basics of Ensemble Models

Learn about what are ensemble models and implement basic ensemble techniques.

13.1. Getting Started with Ensemble Models

14. Random Forest

Understand how a random forest algorithm works and learn how to build a model on a dataset.

14.1. Basics of Random Forest
14.2. Building a Random Forest

15. Clustering

Learn about the basics of clustering and how to evaluate clustering models. Build a clustering model using K-means.

15.1. Introduction to Clustering

15.2. Evaluation Metrics for Clustering
15.3. K-means Clustering
15.4. Way Forward

16. Final Project

Excited to learn Machine Learning? Click here to sign-up for the training.

FAQs

What is this training program about?
This is an online training program in which you will learn about Machine Learning. You will learn Python programming, steps involved in ML life cycle, visualization techniques for data analysis, and various Machine Learning algorithms. At the end of this training program, you will have a solid understanding of Machine Learning techniques and will be able to build end-to-end predictive models.

How will the training be imparted?
You will be taught using pre-recorded videos and text tutorials. The training has quizzes, assignments, and tests to help you learn better. At the end of the training, you will attempt a project to get hands-on practice of what you learned during your training.

What is the duration of this training?
This is a 6 weeks training program.

What are the timings of this training program?
As this is a purely online training program, students can choose to learn at any time of the day. The students can decide the timing according to their convenience.

Who can join? I am a beginner/advanced user, can I learn Machine Learning?
This training would be better suited to beginners who have no prior knowledge of Machine Learning. Anyone who is willing to learn and has interest in Machine Learning can opt for this training program.

Are there any prerequisites for joining this program?
This program is for beginners. There are no prerequisites.

Will there be any project that I will get to work on?
Yes, you will build a predictive model to find out a bank's customer retention for their savings account.

What hardware/software are required for doing this training?
You would require a computer with a working internet connection (minimum system requirements are 4GB RAM and i3 processor). All the necessary software (if required) are uploaded online which can be downloaded during the training.

Will there be a certificate provided at the end of the training?
Yes, a certificate will be provided by Internshala upon completion of the training. Students may download a soft copy of the certificate through our portal.

Will I be able to download the training content?
Yes, you will be able to download the training content.

Can the material be used by a group of students?
No. These training programs are meant for individual users. Multiple users will not be allowed to access the portal using the same account.

If you have any queries or doubts regarding the training, please write to us at trainings@internshala.com or call us on +91 844 844 4853