At EDUCBA, it is a matter of pride to us to make job oriented hands on courses available to anyone, any time and anywhere.

Learn at a time and place, and pace that is of your choice.

Plan your study to suit your convenience and schedule.

# EDUCBA

# Artificial Intelligence Course

Email Contact: info@educba.com

www.educba.com

# Course Overview

In this Course you get to learn:

- How to identify areas of applications of AI

- Methods and algorithms in the design of intelligent systems and computer program

- Statistical, parametric and non-parametric methods for decision making

- Building robots and agents that shows reasoning skills and learning and inference

- Apply supervised techniques such as regression and classification and unsupervised techniques.

# Artificial Intelligence Skills

We learn the following skills:

- Artificial Intelligence

- AI search algorithms

- Heuristic

- Genetic algorithms

- Scikit-learn module

- Predictive Analysis

- Random Forest

- Class Imbalance

- Grid Search

- Adaboost Regressor

- Affinity Propagation Model

- Clustering Quality

- Gaussian Mixture Model

# Course Features

Course Duration- 28+ Hours

**3** Number of Courses

Verifiable Certificates

Lifetime Access

Technical Excellence

## About Artificial Intelligence

Artificial Intelligence today is used in all fields of work specifically banking, insurance, manufacturing, retail, logistics and so on.

Its application in medical diagnosis, robots, remote sensing, etc. is highly state of the art.

AI as a subject includes the use of computer science, mathematics, statistics and domain expertise.

## Deep Learning Course

This is a Bundle Course that includes complete in-depth Artificial Intelligence Courses combined into one Complete Course.

This Bundle perfectly meets the requisite of the industry and gives you a better chance of being hired as a Artificial Intelligence professional.

# 1 Artificial Intelligence with Python

## Section 1. Introduction

- Introduction to Predictive Analysis
- Random Forest and Extremely Random Forest

## Section 2. Class Imbalance and Grid

- Dealing with Class Imbalance
- Grid Search

## Section 3. Adaboost Regressor

- Adaboost Regressor
- Predicting Traffic Using Extremely Random Forest Regressor
- Traffic Prediction

## Section 4. Detecting patterns with Unsupervised Learning

- Detecting patterns with Unsupervised Learning
- Clustering
- Clustering Meanshift

## Section 5. Affinity Propagation Model

- Introduction to Predictive Analysis
- Random Forest and Extremely Random Forest

## Section 6. Clustering Quality

- Clustering Quality
- Program of Clustering Quality

## Section 7. Gaussian Mixture Model

- Gaussian Mixture Model
- Program of Gaussian Mixture Model

## Section 8. Classifiers

- Classification in Artificial Intelligence
- Processing Data
- Logistic Regression Classifier with Example
- Naive Bayes Classifier and its Examples
- Confusion Matrix
- Example of Confusion Matrix
- Support Vector Machines Classifier(SVM)

# 1 Artificial Intelligence with Python

## Section 9. Logic Programming

- Concept of Logic Programming
- Matching the Mathematical Expression
- Parsing Family Tree and its Example
- Analyzing Geography Logic Programming
- Puzzle Solver and its Example

## Section 10. Heuristic Search

- What is Heuristic Search
- Local Search Technique
- Constraint Satisfaction Problem
- Region Coloring Problem
- Building Maze
- Puzzle Solve

## Section 11. Natural Language Processing

- Natural Language Processing
- Examine Text Using NLTK
- Raw Text Accessing (Tokenization)
- NLP Pipeline and Its Example
- Regular Expression with NLTK
- Stemming
- Lemmatization
- Segmentation
- Information Extraction
- Tag Patterns
- Chunking
- Representation of Chunks
- Chinking & Others

# 2 Artificial Intelligence and Machine Learning Training Course

## Section 1. Overview of Artificial Intelligence

- Introduction to Artificial Intelligence
- Definition of Artificial Intelligence
- Intelligent Agents

## Section 2. Representation and Search State Space Search

- Information
- Graph theory
- Problem Solving
- Solution & Others

## Section 3. Representation and search Heuristic search

- Heuristic search overview
- simple hill climbing
- best first search algo
- admissibility-1
- mini-max
- two ply min max
- alpha beta pruning

## Section 4. Machine Learning

- machine learning overview
- perceptron learning
- backpropagation with multilayer neuron
- W for hidden node and backpropagation algo
- backpropagation calculation
- updation of weight and cluster
- k-means cluster,NNalgo and appliaction of machine learning

# 2 Artificial Intelligence and Machine Learning Training Course

## Section 5. Logics and reasoning

- logics reasoning overview

  propositional calculas

- propotional calculus

- predicate calculus

- First order predicate calculus

- modus ponus,tollens

- unification and deduction process

- resolution refutation with example

- convert into clause

- unification substitution andskolemization

- prolog overview

- model based and CBR reasoning

## Section 6.Rule based Programming

- production system

- trace of production system

- knight tour prob in chessboard

- goal driven Vs data driven and inserting and removing facts

- defining rules and commands

- CLIPS installation and clipstutorial

- variable in pattern tutorial 9

- tutorial 10

- more on wildcardmatching

- more on variables

- deffacts and deftemplates & others

## Section 7.Decision Making

- machine learning_overview

- perceptron learning

- perceptron with linearly separable

- backpropagation with multilayer neuron

- W for hidden node and backpropagation algo

- backpropagation algorithm explained

- backpropagation calculation_part01

- backpropagation calculation_part02

- updation of weight and cluster

- k-means cluster,NNalgo and appliaction of machine learning

## Section 8.Stochastic methods

- basics of set theory

- probability distribution

- baysian rule for conditional probability

- examples of bayes theorm

# 3 Machine Learning with R

## Section 1. Introduction

- Introduction to Machine Learning

## Section 2. Getting Started

- How do Machine Learn
- Steps to Apply Machine Learning
- Regression and Classification Problems

## Section 3. Simple Linear Regression and More of Statistics

- Simple Linear Regression
- Simple Linear Regression Continues
- What is Rsquare
- Standard Error
- General Statistics
- General Statistics Continues
- Simple Linear Regression and More of Statistics
- Open the Studio
- What is R Square
- What is STD Error
- Reject Null Hypothesis

## Section 4. Stat and Prob Required for Machine Learning

- Variance Covariance and Correlation
- Root names and Types of Distribution Function
- Generating Random Numbers and Combination Function
- Probabilities for Discrete Distribution Function
- Quantile Function and Poison Distribution
- Students T Distribution, Hypothesis and Example
- Chai-Square Distribution

## Section 5. Multiple Linear Regression

- Data Visualization
- More on Data Visualization
- Multiple Linear Regression
- Multiple Linear Regression Continues
- Regression Variables

# 3 Machine Learning with R

## Section 6. Generalized Linear Model and Generalized Least Square

- Generalized Linear Model
- Generalized Least Square

## Section 7. Knn (K-Nearest Neighbour) Algorithm

- KNN- Various Methods of Distance Measurements
- Overview of KNN- (Steps involved)
- Data normalization and prediction on Test Data
- Improvement of Model Performance and ROC

## Section 9. Decision Tree Classifier and Pruning of Decision Trees

- Decision Tree Classifier
- More on Decision Tree Classifier
- Pruning of Decision Trees

## Section 10. Decision Tree Remaining

- Decision Tree Remaining
- Decision Tree Remaining Continues

## Section 11. Random Forest

- General concept of Random Forest
- Ada Boosting and Ensemble Learning
- Data Visualization & Preparation
- Tuning Random Forest Model and more

## Section 12. Kmeans Clustering

- Introduction to Kmeans Clustering
- Kmeans Elbow Point and Dataset
- Example of Kmeans Dataset
- Creating a Graph for Kmeans Clustering
- Creating a Graph for Kmeans Clustering Continues
- Aggregation Function of Clustering

## Section 13. Naive Bayes classifier

- Conditional Probability with Bayes Algorithm
- Venn Diagram Naive Bayes Classification
- Component OF Bayes Theorem using Frequency Table
- Naive Bayes Classification Algorithm and Laplace Estimator
- Example of Naive Bayes Classification & other

# 3 Machine Learning with R

# 3 Machine Learning with R

## Section 17. Neural Networks

- Black Box Method in Neural Network
- Characteristics of a Neural Networks
- Network Topology of a Neural Networks
- Weight Adjustment and Case Update

## Section 18. Neural Networks A Model Building in R

- Introduction Model Building in R
- Installing the Package of Model Building in R
- Nodes in Model Building in R
- Example of Model Building in R

## Section 19. Time Series Analysis

- Time Series Analysis
- Pattern in Time Series Data
- Time Series Modelling
- Moving Average Model
- Auto Correlation Function
- Inference of ACF and PFCF
- Diagnostic Checking
- Forecasting Using Stock Price
- Stock Price Index
- Run Prophet Stock
- Time Series Data Denationalization
- Average of Quarter Denationalization
- Regression of Denationalization

# 3 Machine Learning with R

## Section 20. Gradient Boosting

- Gradient Boosting Machines
- Errors in Gradient Boosting Machines
- What is Error Rate in Gradient Boosting Machines
- Optimization Gradient Boosting Machines
- Gradient Boosting Trees (GBT)
- Dataset Boosting in Gradient
- Example of Dataset Boosting in Gradient
- Example of Dataset Boosting in Gradient Continues

## Section 21. Market Basket Analysis

- Market Basket Analysis Association Rules
- Market Basket Analysis Interpretation
- Implementation of Market Basket Analysis
- Example of Market Basket Analysis
- Datamining in Market Basket Analysis
- Market Basket Analysis Using Rstudio and more

## Section 22. New Development

- New Development in Machine Learning
- Data Scientist in Machine Learnirng
- Types of Detection in Machine Learning
- Example of New Development in Machine Learning
- Example of New Development in Machine Learning Continues

# Frequently Asked Questions

Can I repeat the Artificial Intelligence course if I do not understand in the first attempt?

Yes, you can repeat it as many times as you want. It has lifetime validity.

How long will it take to complete the Online Artificial Intelligence course?

Usually, people spend 2- 3 months to complete the course. But you can finish it at your comfortable pace.

# Customer Reviews

"

This video training course was created in a easy to understand. The fundamental and concept of Artificial Intelligence were well explained with simplicity approach. The demonstration of using Python and iPython provide an overview how the application works internally.

**Chong Fong Kong**

"

I was googling tutorials looking for Artificial Intelligence & Machine Learning Course. this is the best possible course, because the tutor is very knowledgeable. The course is not too fast – just perfect pace to absorb the new concepts. Very well explained and taught. I'd definitely recommend it!

**Greg Kowalczyk**

"

Material content: Good basic overview of the definitions for "Intelligence" as a whole as well as a quick overview of the field of AI and origins.Comments: Clean and fast, with a good set of definitions and explanations.

**Richard McCloskey**

# EDUCBA

# Artificial Intelligence Course

For Queries please contact:

Email : info@educba.com