

# **Artificial intelligence (AI) course**

## **About Course**

Artificial intelligence course in Bangalore will make you an expert in Deep Learning, Machine Learning, Chabot, Neural Networks, Reinforcement Learning with Live Projects. This Course helps you to Create AI for Real time Applications with Combination of Data Science, Machine Learning and Deep Learning with Hands-on Demo Classes. Learn how to build and implement the AI model from the Basic to Advanced level from this AI Certification Training Course in Bangalore and become an Artificial intelligence engineer.

This Comprehensive Course will Covers the AI Deep Learning with Tensorflow and Keras from the Scratch with Mini Project work for better understanding. You will Gain Additional knowledge on <a href="Tableau">Tableau</a>, <a href="SQL">SQL</a>, <a href="R">R</a> and <a href="Power BI">Power BI</a> Tools and Techniques for Data Analysis and Visualization along with this AI Training in Bangalore.

Automate Real world Boring tasks with AI and Solve the Complex Problems quicks to improve the Business Productivity. Top Rated AI Training Institute with Certified Experts, Unique updated Course Syllabus 2021, Study Materials and Lab Facilities will take you to the next level in AI Skills.

# Course Syllabus

#### 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

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- 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

  Labels (Duration 2brs)

## 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

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### 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-11hrs)**

- Central Tendency
  - Mean
  - Median
  - esant Technologies Mode
  - Skewness
  - Normal Distribution
- Probability Basics
  - O What does it mean by probability?
  - Types of Probability
  - ODDS Ratio?
- > Standard Deviation
  - Data deviation & distribution
  - Variance
- ➢ Bias variance Tradeoff
  - Underfitting
  - Overfitting

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- Distance metrics
  - **Euclidean Distance**
  - Manhattan Distance
- Outlier analysis
  - O What is an Outlier?
  - Inter Quartile Range
  - Box & whisker plot
  - o Upper Whisker
  - Lower Whisker
  - Scatter plot
  - Cook's Distance
- Missing Value treatment
  - o What is NA?
  - Central Imputation
     KNN imputation
  - KNN imputation
  - Dummification
- Correlation
  - Pearson correlation
  - positive & Negative correlation

# **Module 8: Error Metrics (Duration-3hrs)**

- Classification
  - **Confusion Matrix**
  - Precision
  - Recall
  - Specificity
  - o F1 Score
- Regression

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- MSE
- **RMSE**
- **MAPE**

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

- Linear Regression
  - Linear Equation
  - Slope
  - o Intercept
  - R square value
- Logistic regression
  - o 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 Kernal (Duration-2hrs)**

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- 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

### Al 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

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## 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
- Text Matching
   Levenshtein Distance
- Phonetic Matching
- Flexible String Matching

# **Course Reviews**

#### Review 1:

I attended the Artificial Intelligence class at Besant Technologies Bangalore. I want to thank our trainer Mr. Kundan Keshri for sharing his knowledge with us. It provides hands-on experience with real-time examples that helps in understanding the concepts much easier. Thanks to Besant Technologies.

#### Review 2:

I have joined Besant technologies a month before for Artificial Intelligence training. There I learned a lot within a short period of time. And my trainers are Sudheer and Biswa they both have good skills in

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explaining the concepts both theoretically and practically which makes me feel comfortable in learning new things.

#### **Review 3:**

I completed Artificial Intelligence training from Sathesh in Aug 1st week. All topics taught were very clear and informative. I received all the notes and POC. I recommend this training for anyone who looking forward to a career in the Artificial Intelligence field. The trainer is very approachable for any queries and help. Thanks to Besant Technologies.



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