> *Regressions are supervised machine learning techniques which are used to predict a continuous target variable based on one or more independent variables.*

A regression model is trained on the historical data set where it learns to map the independent variables on to the target variable. Once a regression model has been trained, it can be used to make predictions on new data.

There are two main types of regression:

1. Linear regression: In this type of regression model, linearity is assumed in the relationship between the independent variables and the dependent variable such that they can be represented by straight lines. This is a simple yet flexible technique widely applicable in many areas.

2. Nonlinear regression: This type of regression model does not assume linearity in the relationship between independent variables and dependent variable; hence cannot be represented by straight lines. Non-linear regression is much more complicated than linear one but it can provide more accurate results to some types of data.

Regression has countless applications including:

1. Sales prediction: Projection of future sales using past sales statistics and other matters like economic conditions, promotion strategies etc.

2. Prediction of house prices: Estimation for how much will cost every square meter in particular location.

3. Forecasting customer churn rate: This involves determining whether customers will stop using services considering what they have done before and other factors.

References:

- “An Introduction to Statistical Learning” by Gareth James, Daniela Witten, Trevor Hastie, and Robert Tibshirani
- “Regression Analysis” by Douglas C. Montgomery, Elizabeth A. Peck, and G. Geoffrey Vining

Related posts:

1. Define machine learning and explain its importance in real-world applications.
2. Differences Between Machine Learning and Artificial Intelligence
3. Machine Learning works on which type of data ?
4. Finding Machine Learning Datasets
5. What is hypothesis function and testing
6. Explain computer vision with an appropriate example
7. Explain Reinformcement learning with an appropriate exaple
8. Reinforcement Learning Framework
9. Data augmentation
10. Normalizing Data Sets in Machine Learning
11. Machine learning models
12. Unsupervised machine learning

13. Neural Network in Machine Learning
14. Recurrent neural network
15. Support Vector Machines
16. Long short-term memory (LSTM) networks
17. Convolutional neural network
18. How to implement Convolutional neural network in Python
19. What does it mean to train a model on a dataset ?
20. Can a textual dataset be used with an openCV?
21. Name some popular machine learning libraries.
22. Introduction to Machine Learning
23. Like machine learning, what are other approaches in AI ?
24. What is labelled and unlabelled data set in Machine Learning ?
25. What is neural networks in Machine Learning ?
26. How are convolutional neural networks related to supervised learning ?
27. Linearity vs non-linearity in Machine Learning ?
28. What is Machine learning ?
29. What is Machine Learning ?
30. Types of Machine Learning ?
31. Applications of Machine Learning
32. Data Preprocessing
33. Data Cleaning
34. Handling Missing Data
35. Feature Scaling
36. Labeled data in Machine learning
37. Difference between Supervised vs Unsupervised vs Reinforcement learning
38. Machine learning algorithms for Big data
39. Difference between Supervised vs Unsupervised vs Reinforcement learning

40. What is training data in Machine learning
41. What is Ordinary Least Squares (OLS) estimation
42. Scalar in Machine Learning
43. Scalars in Loss Functions | Machine Learning
44. Linear Algebra for Machine Learning Practitioners
45. Supervised Learning
46. Top Interview Questions and Answers for Supervised Learning
47. What are the different types of machine learning?
48. What is a hyperparameter in machine learning ?
49. Unsupervised Learning Interview Q&A
50. TOP INTERVIEW QUESTIONS AND ANSWERS FOR Artificial Intelligence
51. Deep Learning Top Interview Questions and Answers
52. What is target variable and independent variable in machine learning
53. Machine Learning Scope and Limitations
54. Statistics and linear algebra for machine learning
55. What is MNIST ?
56. Some real time examples of machine learning
57. What are the scope and limitations in machine learning ?
58. What is biased data ?
59. Statistics and Linear Algebra for Machine Learning ?
60. What is convex optimization in simple terms ?
61. What is data visualization in simple terms ?
62. What is data preprocessing in machine learning ?
63. What are data distributions, and why are they important ?
64. What is data augmentation in machine learning ?
65. Fundamentals of Neural Networks
66. What are activation functions in neural networks ?

67. Machine Learning Short Exam Notes
68. Machine Learning Short Exam Notes – Quick and Easy Revision Guide