

PGP in AI/ML

Regression - Assignment 1

Submission Date: 23:59hrs on 07-04-2020

Total Marks: 12

1. The following questions are to enhance your understanding of basic concepts and definitions. You are expected to answer these questions on your own without referring to internet. (5 Marks)
 - a) Classify the following use cases into regression or classification algorithms with proper explanations:
(0.5*4 = 2M)
 - i. Facial Recognition
 - ii. Mobile Price Prediction
 - iii. Credit Card Fraud Prediction
 - iv. Customer Churn Prediction
 - b) Provide differences between regression, classification and clustering problems. Give an example where each of these models could be used. (3M)
2. Solve the following matrix using simultaneous equations in python
(3M)
$$\begin{aligned}x + y + z &= 6 \\2y + 5z &= -4 \\2x + 5y - z &= 27\end{aligned}$$
3. The following dataset of size n = 31 provides employee-wise salary. The variables are y = salary of an individual employee and x = years of experience of each individual employee . Find the intercept, coefficient value and error term for this regression problem in Python. How would you convey (interpret) these results in a business context? (2+2 Marks)

Submissions:

Solutions or answers to all questions (excepting programming problems) should be submitted in a word document named 'Roll_No.doc' (Roll_No is your identity number of this programme).

All python code should be submitted in a Jupyter notebook named "Roll_No.ipynb".

NOTE: For any queries, Email @ murtuza.dahodwala@wilp.bits-pilani.ac.in