Random Data - (Test -2)

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subject Machine Learning / AI casino 15 points

DESCRIPTION

Questions:

Perform linear regression on randomly generated data as described below:

1. Generate a random number data set as follows:

x1 = 100 random numbers following uniform distribution (Set random_state=1)
Create x2 as a sum of two terms: x2 = 0.5*x1 + 100 random numbers following normal distribution (Set random_state=1)
Create y as a sum of 4 terms: y = 2 + 2 * x1 + 0.3 * x2 + 100 random numbers following normal distribution(Set random state=1)
******NOTE: Use Random state=1 for the above number generator.***

Calculate and ***print*** the value of **Mean** of y in a file named **output.csv**

2. Fit a linear regression model to predict y using x1 and x2

- Combine x1 and x2 to form X, a single dataset which includes all the predictors
- Fit a linear regression model using y and X
- ***Print*** the values of coefficients and intercept in the same file **output.csv** below the existing row written in step 1

Input Format:

- All the required data will be generated in the solution. No need to read any input file

Output Format:

- You have to perform the operations as required by the above questions and write (written above as **print**) your output to a file named **output.csv**, which should be present at the location **/code/output/output.csv**
- **output.csv** should contain the following three values on three rows:
- **Mean** of y **rounded to 2 decimal places** such as **10.45** or **5.67**
- Values of **coefficients rounded to 1 decimal place** in the form such as **[2.2 1.1]**
- Value of intercept rounded to **1 decimal place** such as **1.1** or **4.4**

Sample Output:

Example: output.csv will have data looking like this:

	A
1	5.67
2	[2.2 3.3]
3	4.1
4	
5	

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DATASETS

No datasets found.