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NPTEL (<https://swayam.gov.in/explorer?ncCode=NPTEL>) » Python for Data Science (course)Course
outlineHow does an
NPTEL online
course work?

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**Non Proctored
Exam(Mar 04)
Session 1 (10am
- 1pm - for Jan
2021)**● Quiz : Non
Proctored

Thank you for taking the Non Proctored Exam Session 1.

Non Proctored Exam Session 1

Your last recorded submission was on 2021-03-04, 12:09 IST Due date: 2021-03-04, 13:00 IST.

Types of questions:

- MCQs - Multiple Choice Questions (a question has only one correct answer)
- MSQs –
 - Multiple Select Questions (a question can have two, three or four correct options)
 - In this case, equal weightage must be given to all options
- True/ False - The learner has to choose either true or false from a given statement.

Follow the instructions given below and answer the questions

- Read the given data apy.csv (<https://drive.google.com/file/d/1Hcmbrh1CpjAUTmgq968c2YK4Qjx0xtYY/view?usp=sharing>) into Spyder environment
- Drop the missing values if there are any

1) Which of the following statements is/are TRUE?

1 point

- ☒ The overall production during the Kharif season was 4,029,970,000 (approx.)
- ☐ The overall production during the Summer season was 434,549,800 (approx.)
- ☒ The overall production during the Autumn season was 64,413,770 (approx.)
- ☐ The overall production during the Kharif season was 2,051,688,000 (approx.)

2) Which of the following crops were produced during the Kharif season?

1 point

- ☒ Arecanut, Arhar/Tur, Bajra, Castor seed
- ☐ Paddy, Maize, Moong (Green Gram), Onion, Apple
- ☐ Banana, Coriander, Gram, Rapeseed & Mustard, Sweet lime

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☒ Black pepper, Cashewnut, Dry chillies, Dry ginger

3) Which district in India had the highest crop production?

1 point

- ☐ Coimbatore
☐ Thrissur
☐ Kannur
☒ Kozhikode

4) During which year, Tamil Nadu had the highest crop production?

1 point

- ☐ 2013
☒ 2011
☐ 1997
☐ 2008

5) Which state in India had the highest crop production? (overall, for all years)

1 point

- ☐ Andhra Pradesh
☐ Tamil Nadu
☒ Kerala
☐ Uttar Pradesh

6) What is the relation between **Area** and **Production**?

1 point

- ☒ There exists a positive correlation between Area and Production
☐ There exists a negative correlation between Area and Production
☐ Area and Production are not correlated
☐ Cannot be determined

7) What is the average crop production?

1 point

- ☐ 17,065,810.29 (approx.)
☐ 50,857.44 (approx.)
☐ 242,361.35 (approx.)
☒ 582,503.44 (approx.)

8) What is the standard deviation of production?

1 point

- ☒ 17,065,813.17 (approx.)
☐ 50,857.44 (approx.)
☐ 242,361.35 (approx.)
☐ 582,503.45 (approx.)

9) Due to some unknown reasons, the crop production for only two states were recorded for the year 2015. Which states are they? 1 point

- ☐ Tamil Nadu and Kerala
☐ Kerala and Andhra Pradesh
☒ Odisha and Sikkim
☐ Sikkim and Punjab

10) The top three produced crops in the year 1997 are ____

1 point

- ☐ Wheat, Potato, Rice

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- ☐ Coconut, Potato, Sugarcane
☐ Coconut, Sugarcane, Rice
☒ Sugarcane, Rice, Wheat

11) State whether the statements are True or False

1 point

- I. Crop year and Area are negatively correlated
II. Crop year and Production are negatively correlated

- ☒ I - True, II - False
☐ I - False, II - True
☐ I - False, II - False
☐ I - True, II - True

12) Which year had the highest crop production? (overall)

1 point

- ☒ 2011
☐ 2010
☐ 2015
☐ 2009

13) The crop that Tamil Nadu produced the most was ____

1 point

- ☐ Sugarcane
☒ Rice
☐ Banana
☐ Coconut

Starting afresh load the given dataset and prepare the dataset by following the steps given below:

- Ensure the datatypes of the columns are appropriate
- Drop the missing values
- Drop all the variables except “**Area**” and “**Production**”
- Split the data into train (80%), test (20%) and set random state as 111

Build a linear regression model with the train dataset by having “Area” as independent variable and “Production” as dependent variable. Predict the test data and compare the predictions against the original test set values. Based on the above mentioned instructions, answer the following questions..

14) What does the R-squared value calculated for the model built signify?

1 point

- ☐ The model is good as the R-squared-value is close to 1
☒ The model is not good as the R-squared-value is close to 0
☐ R-squared-value does not show the performance of the model
☐ R-squared-value cannot be computed with this data

15) For the model that has been built using the information given in the Q14, the RMSE of the linear regression model is ____ **1 point**

- ☐ 14708129.51738457
☒ 17659684.12224048

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X

- ☐ 14718129.43235968
- ☐ 14708029.87934857

You may submit any number of times before the due date. The final submission will be considered for grading.

Submit Answers