

You are taking "EXAM" as a timed exam. The timer on the right shows the time remaining in the exam.

[End My Exam](#)

0:49:29

- ▶ Welcome!
- ▶ Module 1
 - Introduction
- ▶ Module 2 - Data Wrangling
- ▶ Module 3 - Exploratory Data Analysis
- ▶ Module 4 - Model Development
- ▶ Module 5 – Model Evaluation:
- ▼ EXAM
 - Exam Instructions
 - EXAM**
Timed Exam
 - Redo Exam
- ▶ Course Survey and Feedback
- ▶ Certificate

QUESTION 1 (1/1 point)

What does the following command do:

```
df.dropna(subset=["price"], axis=0)
```

☒ Drop the "not a number" from the column price ✓

☐ Drop the row price

☐ Rename the data frame price

You have used 2 of 2 submissions

QUESTION 2 (1/1 point)

How would you provide many of the summery statistics for all the columns in the dataframe "df":

☒ df.describe(include = "all") ✓

☐ df.head()

☐ type(df)

☐ df.shape

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QUESTION 3 (1/1 point)

How would you find the shape of the dataframe df

☐ df.describe()

☐ df.head()

☐ type(df)

You have used 2 of 2 submissions

QUESTION 4 (1/1 point)

What task does the following command `df.to_csv("A.csv")` perform

- ☐ change the name of the column to "A.csv"
- ☐ load the data from a csv file called "A" into a dataframe
- ☒ Save the dataframe df to a csv file called "A.csv" ✓

You have used 2 of 2 submissions

QUESTION 5 (1/1 point)

What task does the following line of code perform:

```
df['peak-rpm'].replace(np.nan, 5,inplace=True)
```

- ☒ replace the not a number values with 5 in the column 'peak-rpm' ✓
- ☐ rename the column 'peak-rpm' to 5
- ☐ add 5 to the data frame

You have used 2 of 2 submissions

QUESTION 6 (1/1 point)

What task does the following line of code perform:

```
df['peak-rpm'].replace(np.nan, 5,inplace=True)
```

- ☒ replace the not a number values with 5 in the column 'peak-rpm' ✓
- ☐ rename the column 'peak-rpm' to 5

You have used 2 of 2 submissions

QUESTION 7 (1 point possible)

How do you "one hot encode" the column 'fuel-type' in the dataframe df

☒ `pd.get_dummies(df["fuel-type"])`

☐ `df.mean(["fuel-type"])`

☐ `df[df["fuel-type"]==1]=1`

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QUESTION 8 (1/1 point)

What does the vertical axis in a scatter plot represent

☐ independent variable

☒ dependent variable ✓

QUESTION 9 (1/1 point)

What does the horizontal axis in a scatter plot represent

☒ independent variable ✓

☐ dependent variable

You have used 1 of 1 submissions

QUESTION 10 (1/1 point)

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0:49:29

☐ 10 x 100☒ 10 x 10 ✓☐ 100x100☐ 100x100

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QUESTION 11 (1/1 point)

what is the largest possible element resulting in the following operation "df.corr()"

☐ 100☐ 1000☒ 1 ✓

You have used 2 of 2 submissions

QUESTION 12 (1/1 point)

if the Pearson Correlation of two variables is zero:

☐ the two variable have zero mean☒ the two variables are not correlated ✓

You have used 1 of 1 submissions

QUESTION 13 (1/1 point)

if the p value of the Pearson Correlation is 1:

☐ the variables are not correlated

☒ none of the above ✓

You have used 2 of 2 submissions

QUESTION 14 (1/1 point)

What does the following line of code do: `lm = LinearRegression()`

☐ fit a regression object `lm`

☒ create a linear regression object ✓

☐ predict a value

You have used 2 of 2 submissions

QUESTION 15 (1/1 point)

If the predicted function is:

$$\hat{Y} = a + b_1 X_1 + b_2 X_2 + b_3 X_3 + b_4 X_4$$

The method is

☐ Polynomial Regression

☒ Multiple Linear Regression ✓

You have used 2 of 2 submissions

QUESTION 16 (1/1 point)

What steps do the following lines of code perform:

```
Input=[('scale',StandardScaler()),('model',LinearRegression())]
```

```
pipe.fit(Z,y)
```

```
ypipe=pipe.predict(Z)
```

- ☐ Standardize the data, then perform a polynomial transform on the features Z
- ☐ find the correlation between Z and y
- ☒ Standardize the data, then perform a prediction using a linear regression model using the features Z and targets y ✓

You have used 2 of 2 submissions

QUESTION 17 (1/1 point)

What is the maximum value of R^2 that can be obtained

☐ 10

☒ 1 ✓

☐ 0

You have used 2 of 2 submissions

QUESTION 18 (1/1 point)

We create a polynomial feature as follows "PolynomialFeatures(degree=2)", what is the order of the polynomial

☐ 0

☐ 1

☒ 2 ✓

You have used 2 of 2 submissions

QUESTION 19 (1/1 point)

You have a linear model the average R^2 value on your training data is 0.5, you perform a 100th order polynomial transform on your data then use these values to train another model, your average R^2 is 0.99 which comment is correct

- ☐ 100-th order polynomial will work better on unseen data
- ☐ You should always use the simplest model
- ☒ the results on your training data is not the best indicator of how your model performs, you should use your test data to get a better idea ✓

You have used 2 of 2 submissions

QUESTION 20 (1/1 point)

You train a ridge regression model, you get a R^2 of 1 on your training data and you get a R^2 of 0 on your validation data, what should you do:

- ☒ Nothing your model performs flawlessly on your test data ✓
- ☐ your model is under fitting perform a polynomial transform
- ☐ your model is overfitting, increase the parameter alpha

You have used 2 of 2 submissions

