Model Development

Graded Quiz • 15 min

Due May 17, 12:29 PM IST

TOTAL POINTS 6

1. If the predicted function is: 1 point

$$\hat{y} = b_0 + b_1 x_1 + b_2 x_2 + b_3 x_3 + b_4 x_4$$

The method is:

- ○ Polynomial Regression
- ◉ Multiple Linear Regression

2. What is the maximum value of **R^2** that can be obtained? 1 point

- ○ 10
- ◉ 0
- ○ 1

3. If **X** is a dataframe with 100 rows and 5 columns, and **y** is the target with 100 samples, and assuming all the relevant libraries and data have been imported, and the following line of code has been executed: 1 point

```
LR = LinearRegression()

LR.fit(X, y)

yhat = LR.predict(X)
```

How many samples does **yhat** contain?

- ○ 500

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1

3. If **X** is a dataframe with 100 rows and 5 columns, and **y** is the target with 100 samples, and assuming all the relevant libraries and data have been imported, and the following line of code has been executed: 1 point

```
LR = LinearRegression()

LR.fit(X, y)

yhat = LR.predict(X)
```

How many samples does **yhat** contain?

- 500
- 5
- 100

4. What value of **R^2** (coefficient of determination) indicates your model performs best? 1 point

- -1
- 1
- 0

5. The larger the mean square error, the better your model has performed 1 point

- True
- False

6. Consider the following equation: 1 point

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- -1
- 1
- 0

5. The larger the mean square error, the better your model has performed — 1 point

- True
- False

6. Consider the following equation: — 1 point

$$y = b_0 + b_1 x$$

What is the parameter **b_0** (b subscript 0)?

- The predictor or independent variable
- The target or dependent variable
- The intercept
- The slope

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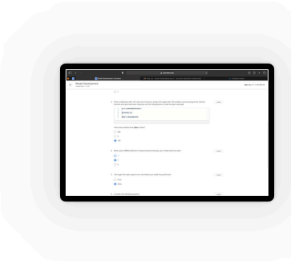

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1. What does the following line of code do? 1 point

```
lm = LinearRegression()
```

- Fit a regression object lm
- (•) Create a linear regression object
- Predict a value

2. What is the maximum value of **R^2** that can be obtained? 1 point

- 10
- 0
- (•) 1

3. We create a polynomial feature as follows "**PolynomialFeatures(degree=2)**"; what is the order of the polynomial? 1 point

- 0
- 1
- (•) 2

4. Which statement is true about Polynomial linear regression? 1 point

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4. Which statement is true about Polynomial linear regression? 1 point

- Polynomial linear regression is not linear in any way
- Although the predictor variables of Polynomial linear regression are not linear the relationship between the parameters or coefficients is linear
- Polynomial linear regression uses linear Wavelets

5. The larger the mean square error, the better your model has performed 1 point

- True
- False

6. Consider the following equation: 1 point

$$y = b_0 + b_1 x$$

What is the parameter **b_0** (b subscript 0)?

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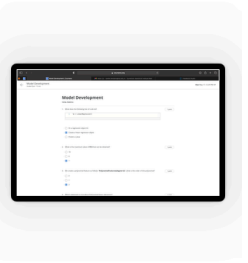

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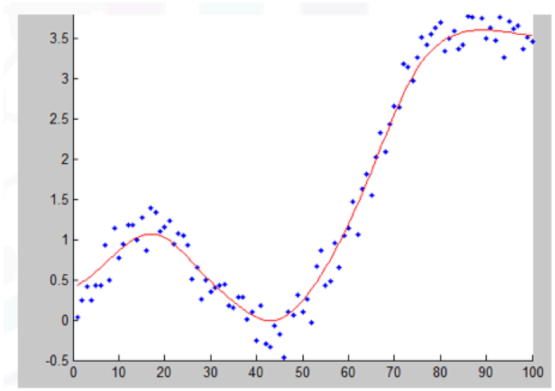
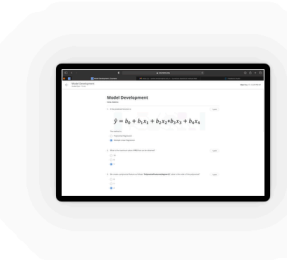
4. What value of **R^2** (coefficient of determination) indicates your model performs best? 1 point

- -1
- 1
- 0

5. Consider the plot of one independent and one dependent variable. This is an example of what? 1 point



- Multiple Linear Regression
- Polynomial Regression
- Linear Regression



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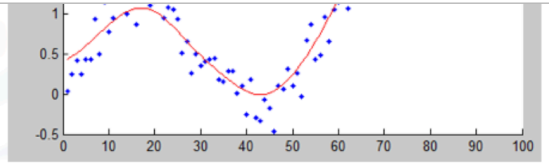

- (●) Multiple Linear Regression
- ( ) Polynomial Regression
- ( ) Linear Regression

6. Consider the following equation: 1 point

$$y = b_0 + b_1 x$$

What is the parameter **b_0** (b subscript 0)?

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