On Thursday, February 16th at 6:00AM EST, UTC-5, we will be conducting a brief database maintenance. The event should last about 5 minutes.

Week 5 Quiz

Bookmark this page

Checkboxes

10/10 points (graded)

Suppose you derived a classification model. The performance you obtained on the training set and the test set are both poor (large error). Check all that apply.

- [x] The model suffers from high-bias. ✔
- [ ] The model overfits the data.
- [x] Adding more complex features may help derive a better model. ✔

✔

Submit You have used 1 of 1 attempt

✔ Correct (10/10 points)

Multiple Choice

10/10 points (graded)

The in-sample error (error of a learning algorithm on the training set) is typically lower than the out-sample error on a test set.

- (•) True ✔
- ( ) False

Submit You have used 1 of 1 attempt

5.4 Linear Models for Regression

Week 5 Quiz: Machine Learning
Quiz due Apr 11, 2017 05:00 IST

Week 5 Discussion Questions

✔ Correct (10/10 points)

Multiple Choice

10/10 points (graded)

We can get multiple local optima if we perform a linear regression by minimizing the mean square error.

- True
- False ✔

Submit You have used 1 of 1 attempt

✔ Correct (10/10 points)

Multiple Choice

10/10 points (graded)

With K-NN, one can represent only linear decision boundaries.

- True
- False ✔

Submit You have used 1 of 1 attempt

✔ Correct (10/10 points)

Multiple Choice

10/10 points (graded)

If the performance of a classification model on the test set is poor, you can just re-calibrate your model parameters to achieve a better model.

- True

False ✔

Submit You have used 1 of 1 attempt

✔ Correct (10/10 points)

Multiple Choice

10/10 points (graded)

The examples in a validation set are used to train the classification model.

True

False ✔

Submit You have used 1 of 1 attempt

✔ Correct (10/10 points)

Multiple Choice

10/10 points (graded)

To learn a regression model you can either use gradient descent or normal equation.

True ✔

False

Submit You have used 1 of 1 attempt

✔ Correct (10/10 points)

Multiple Choice

10/10 points (graded)

Because it is straightforward to calculate in just one step, using normal equation is the preferred method when the feature space is large (e.g., 10,000 features).

- ○ True
- ◉ False ✔

Submit You have used 1 of 1 attempt

✔ Correct (10/10 points)

Multiple Choice

10/10 points (graded)

If the learning rate α is small enough, gradient descent converges very quickly.

- ○ True
- ◉ False ✔

Submit You have used 1 of 1 attempt

✔ Correct (10/10 points)

Checkboxes

10/10 points (graded)

What is the difference between classification and regression? Check all that apply.

- ☐ Classification requires labeled data, while regression requires unlabeled data.

- [ ] Classification has numerical values as labels while regression has categorical (discrete) labels.
- [x] Regression has numerical values as labels while classification has categorical (discrete) labels. ✔

✔

Submit You have used 1 of 1 attempt

✔ Correct (10/10 points)