



✓ **Congratulations! You passed!**
TO PASS 80% or higher

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GRADE
100%

Understanding Support Vector Machines

TOTAL POINTS 3

1. Hinge loss...

1 / 1 point

☒ Is a convex surrogate for misclassification loss

✓ **Correct**

Correct! Hinge loss is meant to capture important characteristics of misclassification loss while still being convex.

☐ Changes angles for different points

☒ Penalizes incorrectly labelled data points that are further from the decision boundary more than those that are closer

✓ **Correct**

Correct! Hinge loss penalizes data points that are far on the wrong side of the decision boundary.

☐ Is a kind of regression loss

☐ Is a differentiable surrogate for misclassification loss

2. What is true of the line found by hard-margin SVM on linearly separable data?

1 / 1 point

- ☐ It's always a two-dimensional line.
- ☐ It minimizes misclassifications.
- ☐ The line is the same distance to multiple training examples from all the classes.
- ☒ The line is the same distance from the closest training example from each class.

✓ **Correct**

Correct! The maximum minimum margin is the same distance, as long as the data is actually linearly separable.

3. What package must you import to build Support Vector Machines in scikit-learn?

1 / 1 point

- ☒ svm
- ☐ svc
- ☐ ensemble
- ☐ tree
- ☐ linear_model

✓ **Correct**

Correct!