

✔ Congratulations! You passed!

Grade received 90% To pass 80% or higher

Go to next item

Total points 10

1.

Assume that your objective is to minimize the transformation of X as similar to Y as possible, what would you optimize to get R ? ($XR \approx Y$)

1 / 1 point

☒

Minimize the distance between XR and Y

☐

Maximize the distance between XR and Y

☐ Maximize the dot product between XR and Y

✔ Correct

This is correct.

2.

When solving for R , which of the following is true?

1 / 1 point

- ☐ Create a forloop, inside the forloop: (initialize R , update the loss, compute the gradient.

☒ Initialize R , create a forloop, inside the forloop: (compute the gradient, update the loss)

☐ Initialize R , compute the gradient, create a forloop, inside the forloop: (update the loss)

✔ Correct

This is correct.

3.

The Frobenius norm of $A = \begin{pmatrix} 1 & 3 \\ 4 & 5 \end{pmatrix}$ is

1 / 1 point

7.14

✔ Correct

7.14

4.

Assume $X \in \mathbb{R}^{m \times n}$, $R \in \mathbb{R}^{n \times n}$, $Y \in \mathbb{R}^{m \times n}$ which of the following is the gradient of $\|XR - Y\|_F^2$?

1 / 1 point

- ☒ $\frac{2}{m}X^T(XR - Y)$

☐ $\frac{2}{m}X(XR - Y)$

☐ $\frac{2}{m}(XR - Y)X$

✔ Correct

This is correct.

5.

Imagine that you are visiting a city in the US. If you search for friends that are living in the US, would you be able to determine the 2 closest of ALL your friends around the world?

1 / 1 point

☒ No

✔ Correct

This is correct.

6.

What is the purpose of using a function to hash vectors into values?

1 / 1 point

✔ Correct

This is correct.

- ☒ To not have to spend time comparing vectors with other vectors that are completely different.

✔ Correct

This is correct.

- ☐ It helps us create vectors.

7.

Given the following vectors, determine the true statements.

1 / 1 point

P :

$\begin{bmatrix} 1 \\ 1 \end{bmatrix}$

V_2 : $\begin{bmatrix} 1 \\ 1 \end{bmatrix}$

V_3 : $\begin{bmatrix} 2 \\ 2 \end{bmatrix}$

- ☒ PV_1^T and PV_2^T have the same sign.

☐ PV_1^T and PV_2^T are equal in magnitude.

☐ PV_1^T and PV_3^T have the same sign.

8.

We define H to be the number of planes and h_i to be 1 or 0 depending on the sign of the dot product with plane i . Which of the following is the equation used to calculate the hash for several planes.

1 / 1 point

- ☒ $\sum_i^H 2^i h_i$

☐ $\sum_i^H 2^{H-i} h_i$

- ☐ $\sum_i^H 2^{h_i} i$

✔ Correct

Correct.

- ☐ PCA

☒ Approximate Nearest Neighbors

✔ Correct

This is correct.

✔ Correct

This is correct.

10.

Hash tables are useful because

0 / 1 point

☒ This is correct.

- ☒ speed up look up

✔ Correct

This is correct.

- ☒ classify with higher accuracy

✘ This should not be selected

This is not true.

- ☐ can always be reproduced