

← Back Hashing and Machine Translation
Practice Quiz • 30 min • 10 total points

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

1 / 1 point

(Answer should be in 2 decimal places)

7.14

✓ Correct
7.14

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

1 / 1 point

☒ $\frac{2}{m} X^T (XR - Y)$

☐ $\frac{2}{m} X (XR - Y)$

☐ $\frac{2}{m} (XR - Y) X$

☐ $\frac{2}{m} (XR - Y) X^T$

✓ Correct
This is correct.

Practice Quiz • 30 min • 10 total points

1 / 1 point

✔ **Correct**
This is correct.

1 / 1 point

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

Practice Quiz • 30 min • 10 total points

1 / 1 point

- ☒ 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.

← Back Hashing and Machine Translation
Practice Quiz • 30 min • 10 total points

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

☐ Yes, because I am already in the country and that implies that my closest friends are also going to be in the same country.

☒ No

✓ Correct
This is correct.

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

1 / 1 point

☒ To speed up the time it takes when comparing similar vectors.

✓ Correct
This is correct.

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

✓ Correct
This is correct.

← Back Hashing and Machine Translation
Practice Quiz • 30 min • 10 total points

☐ K-means

☒ Locality sensitive hashing

✓ Correct
This is correct.

10. Hash tables are useful because

1 / 1 point

☒ allow us to divide vector space to regions.

✓ Correct
This is correct.

☒ speed up look up

✓ Correct
This is correct.

☐ classify with higher accuracy

☒ can always be reproduced

✓ Correct
You will always hash the same vector to the same bucket with the same hash function.

