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- Review
- Octave/Matlab Tutorial
- Review
- Reading: Lecture Slides

10 min
- Quiz: Octave/Matlab Tutorial

5 questions
- Reading: Please read if you've switched from the original version

10 min
- Programming Assignment: Linear Regression

3h

✔

Congratulations! You passed!

Grade received 80%

Quiz • 30 min

To pass 80% or higher

✔

Submit your assignment

Octave/Matlab Tutorial

Due Sep 26, 11:59 PM PDT Attempts 3 every 8 hours

Latest Submission Grade 80%

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Receive grade

1. Suppose I first execute the following Octave/Matlab commands:

To Pass 80% or higher

1 A = [1 2; 3 4; 5 6];

2 B = [1 2 3; 4 5 6];

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Which of the following are then valid commands? Check all that apply. (Hint: A' denotes the transpose of A.)

✖ Incorrect

2.

Let $A = \begin{bmatrix} 16 & 2 & 3 & 13 \\ 5 & 11 & 10 & 8 \\ 9 & 7 & 6 & 12 \\ 4 & 14 & 15 & 1 \end{bmatrix}$.

1 / 1 point

Which of the following indexing expressions gives $B = \begin{bmatrix} 16 & 2 \\ 5 & 11 \\ 9 & 7 \\ 4 & 14 \end{bmatrix}$? Check all that apply.

✔ Correct

3.

Let A be a 10x10 matrix and x be a 10-element vector. Your friend wants to compute the product Ax and writes the following code:

1 / 1 point

1 v = zeros(10, 1);

2 for i = 1:10

3 for j = 1:10

4 v(i) = v(i) + A(i, j) * x(j);

5 end

6 end

How would you vectorize this code to run without any FOR loops? Check all that apply.

✔ Correct

4.

Say you have two column vectors v and w , each with 7 elements (i.e., they have dimensions 7x1). Consider the following code:

1 / 1 point

1 z = 0;

2 for i = 1:7

3 z = z + v(i) * w(i)

4 end

Which of the following vectorizations correctly compute z? Check all that apply.

✔ Correct

5.

In Octave/Matlab, many functions work on single numbers, vectors, and matrices. For example, the sin function when applied to a matrix will return a new matrix with the sin of each element. But you have to be careful, as certain functions have different behavior. Suppose you have an 7x7 matrix X . You want to compute the log of every element, the square of every element, add 1 to every element, and divide every element by 4. You will store the results in four matrices, A, B, C, D . One way to do so is the following code:

1 / 1 point

1 for i = 1:7

2 for j = 1:7

3 A(i, j) = log(X(i, j));

4 B(i, j) = X(i, j) ^ 2;

5 C(i, j) = X(i, j) + 1;

6 D(i, j) = X(i, j) / 4;

7 end

8 end

Which of the following correctly compute A, B, C , or D ? Check all that apply.

✔ Correct

Go to next item

Try again

⚠

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