CSE 404 HW 01

1.

2.

1. They are different.

3.

4.

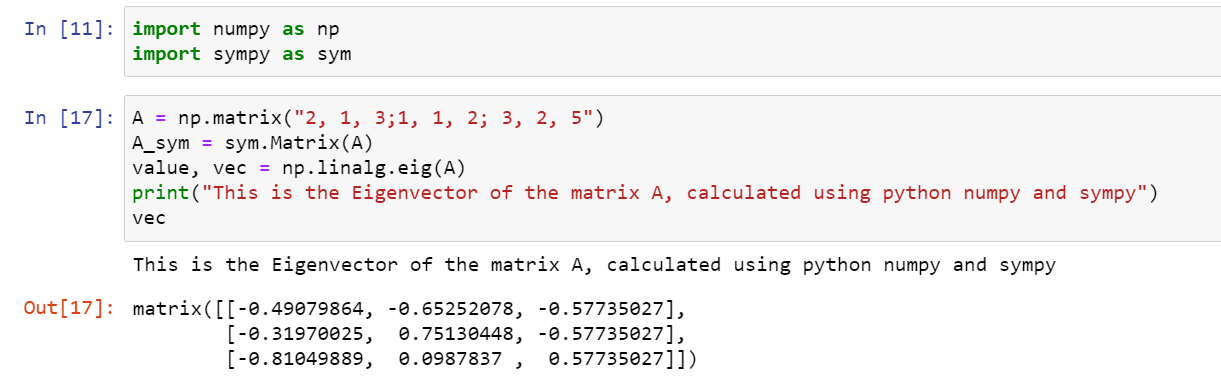
5.

1. ‘i’ in X represents the row number, and ‘i’ in Y represents the column number.

By multiplying X and Y matrices,

6.

7.

* 1. eigenvalues
  2. Eigenvector

1. Eigen Decomposition of A
2. Rank of A
   1. So, the rank is 2
3. No, because not all eigen values are positive, 0 is one of them.
4. Yes, since all eigen values are non-negative.
5. Yes, since the determinant of A is 0.