

Machine Learning

Pandas, Numpy

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Exercise 1:

1- Make a data with 20 records by format as follows:

Num	Name	Age	Programming	English	Philosophy
1	Nguyen	20	7	9	8
2				

2- Using Pandas to read the data (*.csv, *.xlsx)

3- Calculate the result column = average(Programming, English, Philosophy) and save to new file

4- Read top 4 lines

5- Visualization with 4 scores (Programming, English, Philosophy, Result)

6- Show Min, Max, Average of 4 scores

7- Print out top 5 students with the highest result score

8- Calculate Pearson and Spearman (handmade function & Library) between Age, Programming, English, Philosophy and Result

9- Using heatmap to visualize the result of the question 8

Exercise 2:

Do Exercise 1 on Google Collab using Shared Data on Google drive

Exercise 3:

Write a program (using numpy) to compute:

- the multiplication of two given matrixes.
- the outer product of two given vectors
- the cross product of two given vectors
- the determinant of a given square array
- the determinant of an array
- the inner product of vectors for 1-D arrays (without complex conjugation) and in higher dimension