Dear students,

In order to complete the activity for BDA course you can work in teams or individually. The team can consist of 1-3 people. The maximum score obtained by each team (or single person if the project is completed individually) is 30 points, maximum 10 points for each member of the team. For obtaining a 10 grade, you need to get 10 points/person and for obtaining a 5 grade you need to get 5 points/persons. The project needs to be presented as a scientific paper until 15.12.2023. The projects needs to be submitted to [ioandaniel.borlea@upt.ro](mailto:ioandaniel.borlea@upt.ro) until 20.00, 15.12.2023.

To complete the activity in the BDA course, each team must complete a project in the form of a paper presented at a conference. In the final project, each team will have to implement the K-means (KM) clustering algorithm and the Fuzzy C-means (FCM) clustering algorithm. You can use any programming language you want.

**Mandatory (50% of the score**): For testing the implemented algorithms, the IRIS database is used, information about it can be found here: https://archive.ics.uci.edu/ml/datasets/iris. You must process databases: Iris-150 and present the results obtained. You need to process the dataset with KM and FCM algorithms.

**Mandatory (25% of the score):** For the Dataset2 database, this is an unknown database, you must try to partition this database as best you can using KM and FCM. You must present how you chose the optimal number of clusters and the results obtained.

**Optional (25% of the score):** Pick a dataset from the internet, apply the KM and FCM algorithms over it and present the results.

In the final conference paper, you must present the following (please use the document conference-template-a4.docx as a paper template):

- You must briefly present the two algorithms

- Describe the implementation performed

- The processing results obtained for the Iris database

- The results obtained for the Dataset2 database.

- The results obtained for the dataset picked by you.

- The problems that appeared during the implementation and how they were solved

- Conclusions

Success!