



Unsupervised Learning Project

2023-2024

➤ **Phase 0:**

Choose your team member and select one topic from the following to be implemented in phase2.

- **Fuzzy c-mean**
- **Entropy based fuzzy**
- **DBSCAN**
- **Hamming**
- **Self-organizing maps**
- **Simple competitive network**

Use the below form to write your team and topic.

https://docs.google.com/spreadsheets/d/17zpBAoGbKEFG-IVZEbG-N_lueXjqcFXR/edit?usp=share_link&oid=107689402651618110534&rtpof=true&sd=true

Deadline for phase 0 is on 11-12-2023 at 11:59 PM

➤ Phase 1:

On this phase you should:

- Search about one unlabeled dataset
- Apply PCA technique from scratch on it.
- Using different Q Matrix and select best one that not changes the original feature vectors too much and at the same time reduce the dimensionality.
- Report your trails and comment on the result you got from applying PCA.

Deadline for phase 1 is on 18-12-2023 at 11:59 PM

➤ Phase 2:

- Apply the unsupervised learning technique you chose on your dataset before and after apply PCA with the best Q matrix.
- Update your report with your comment the effect of using PCA.

Deadline for phase 2 is on 28-12-2023 at 11:59 PM



Some Important Notes:

- Team member could be from different sections
- Max member in the team is five
- We will rearrange the topic distribution randomly (in case groups always select the same topics or there is a topic doesn't covered by any group).
- Deliver of project will be on google classroom.
- You must name your project by your group number

Group 1		
---------	--	--