

**Title:**

Classify a remote sensed image for land use land cover using Fisher's Linear Discriminant classifier. Compare the output with LDA and PCA based classifiers.

**Description:**

All assignments must be submitted by end of April 2022 followed by a brief presentation. The submission must include

- A 1-2-page writeup on the algorithm implemented including reference to book/paper
- Source code with documentation
- Executables
- Sample data
- Outputs with clear description of which parameters and input image were used to produce each output

**Dataset:**

- [https://www.ehu.eus/ccwintco/index.php?title=Hyperspectral Remote Sensing Scenes](https://www.ehu.eus/ccwintco/index.php?title=Hyperspectral_Remote_Sensing_Scenes)
- <https://rslab.ut.ac.ir/data>

**Work Distribution:**

- Naman : PCA + LDA coding
- Ranjan : Fisher's coding
- UPS on documentation and report making, explaining algo etc.

**PCA :**

- Dimensionality reduction and they classify based on the reduced dimension vector.

**LDA:**

- Some kind of dimensionality reduction

**Fisher's Linear Discriminant classifier:**

- <https://towardsdatascience.com/fishers-linear-discriminant-intuitively-explained-52a1ba79e1bb>