



Semester Project Part 2

Semester Project

► Semester Project Deadlines:

1. ~~Part 1: 02/20 at 9:59 am (10% of final grade).~~
2. Part 2: 03/20 at 9:59 am (10% of final grade).
3. Part 3: 05/02 at 11:59 pm (10% of final grade).
4. Report: 05/05 11:59 pm (25% of final grade).

► The project is to be done in groups of 4 students.

► The groups have been published on Blackboard.

Semester Project Part 2: Video Presentation

- Deliverable: 8 minutes of video presentation.
- Create a PowerPoint presentation (maximum 8 slides).
- Use MS Teams to create the video of the PowerPoint presentation.
- Each member of the group should introduce him/her-self.
- Each member should speak equally and should be visible when speaking.
- Make sure that your video is saved on SharePoint and is not expiring.
- Make sure that the instructor and both TAs have access to it.
- Submit the link to the video on Blackboard.
Penalty for submitting the video itself on Blackboard: 50%.
- If you submit a video shorter than 7'45'': 25% penalty
If you submit a video longer than 8'15'': 50% penalty.
- Penalty for late assignments: 33.34% per day.

Semester Project Part 2

- Use the same dataset than for the Semester Project Part 1.
- Perform classification or regression based on your dataset.
- Use 4 modeling techniques:
 - Linear regression/classification
 - KNN
 - Random Forest
 - Another one that you can choose. Deep Learning is not allowed.
- Perform model structure selection to select the hyperparameters of your models.
- Keep some test data to report the performances of your selected models.
- Do not perform variable/feature selection. Use all the variables you selected in the Semester Project Part 1.

What should be in your presentation?

- Presentation of the models you are going to use.
- Presentation of the model structure selection(s) that you have decided to use.
- A comparison of the results using the test data.
- A comparison with a naïve classification technique (baseline).

To submit

- The link to your video presentation on SharePoint.
- Group_X_data_cleaned.csv
- Group_X_linear.ipynb
- Group_X_knn.ipynb
- Group_X_randomforest.ipynb
- Group_X_yourchoice.ipynb
- Group_X_presentation_of_the_test_results.ipynb

Each Jupiter Notebook file should include the model structure selection