Lab 8: Fairness exploration on the COMPAS dataset and varitional autoenconders

INF581: Advanced Machine Learning and Autonomous Agents

This lab contains two independent tasks, each being self-described in a separate Jupyter notebook:

Task 1 : Fairness exploration on the COMPAS dataset. Refer to the notebook `COMPAS-notebook-task`.

Task 2 : Implementation of a conditional VAE. Refer to the notebook `CVAE-notebook-task`.

Task 1 is not graded, but there is a quiz with a question on fairness and doing the task may help you understand the material needed to answer the question. Task 2 is graded.

Summary of the (graded) assignment for Week 8

The assignment of this week has two components (each worth half of this assignment's score):

1. A quiz with three questions.

   The quiz consists of theoretical questions about the lecture. The text of the quiz is available on moodle (from 5:30pm). You should input your answer at the following link:

   <div align="center">

   https://framaforms.org/inf581-2023-week-8-quiz-1677057572

   </div>

2. A code assignment corresponding to Task 2 above.

   The precise assignment is described in the noteboook `CVAE-notebook-task`. Use Python 3. You should submit a single file, which must be named `run_cvae.py`. The code should be submitted at the following link:

   <div align="center">

   https://nuage.lix.polytechnique.fr/index.php/s/m5WicWFDRfrbzf4

   </div>

Very important: Please make sure that you include in the file your identification information:

```
info = {

    # TODO replace the following Email with your own
    'Email' : 'firstname.lastname@polytechnique.edu',
    'Alias' : 'Anonymous', # optional
}
```

The deadline for both the quiz and the code submission is:

Wednesday March 8, 12pm (midday).