**Lab2 Task duration determination**

1. **Problem**

Task management is an important part of software development and a huge part of the work of the project manager. The idea is to find a machine learning solution that can make this task easier for managers. Firstly, the objective was to be able to generate automatically an entire Gantt chart. But the first step in order to realize this is to be able to determine the duration of a task automatically so this lab will focus on this goal.

1. **Data collection**

In order to train our machine learning model, we need to get some data, with inputs and outputs.

But this kind of data are private, relative to companies information, so it’s hard to find dataset with this information. More than hard I couldn’t find a dataset interesting enough to be use so I need to find another solution.

This solution was to simulate a dataset with the inputs and the output that I want. This solution is not the best one, but this is the first step in order to train the model and be able to know if this approach could be interesting or not. If yes we could in a second time try to get some real data from some companies of software engineering old project.

Describe here all inputs and output

First all the input were generated randomly in some predefine and realistic ranges.  
And in order to generate the duration I work with two values: *min\_duration* and *max\_duration* and the duration was a random value between these two ones. *Min\_duration* is modifying with some rules that I create about the inputs generate.

List some rules here

Same for the *max\_duration* that varied in function of the priority of the task.

1. **Machine learning approaches**
   1. **Which method(s)**
   2. **Implementation details**
2. **Results (and user feedback)?**
3. **Future improvements or research**

Dataset, other ml technics other inputs

An another point of improvements is now that we are able to determine with an interesting precision the duration of tasks, to be able to selected and assign automatically team members to different tasks knowing their specialties and qualities for example.

Not only duration estimation but also effort and links between tasks, generate automatically all the Trello/timetable