#### Data sets

### Data

set: <a href="https://drive.google.com/a/diag.uniroma1.it/file/d/14p\_YtIWVqBNxvO">https://drive.google.com/a/diag.uniroma1.it/file/d/14p\_YtIWVqBNxvO</a> MWRPp-qWEops0wAJ1F

### Blind test

set: <a href="https://drive.google.com/a/diag.uniroma1.it/file/d/1uCIIVNvQoa2fXdQ">https://drive.google.com/a/diag.uniroma1.it/file/d/1uCIIVNvQoa2fXdQ</a> Qg2e5GHt\_5bY3BgOd

Data set contains labelled data as explained in the seminar, blind test set contains only input data to classify after model creation.

## Project development

1) Solve the two classification problems: A) optimization prediction, B) compiler prediction.

For each classification problem, realize at least two variants (varying feature extraction, learning algorithm, learning hyper-parameters, etc.).

Note: Use any method at your choice, except neural networks that will be subject of the second homework.

- 2) Evaluate each variant in a proper way. Find the best model and motivate the choice.
- 3) For each classification problem, apply the best model to predict output for the blind test set.
- 4) Write a report (about 10 pages) explaining all the work done: design and implementation choices, evaluation procedure and results. Reports must be individual.

# Submission procedure

Submit through classroom the following files:

- 1) PDF file of the report (no other formats accepted),
- 2) ZIP file with the code (without data set),
- 3) CSV file with output on the blind test set, name of the file should be <your\_matricola>.csv (e.g., 1234567.csv). If you don't have a matricola, use your last name.

Deadline: 10/11/2019 11:59 PM CET