Labs
Optimization for Machine Learning
Spring 2019

EPFL
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github.com/epfml/OptML_course

Problem Set 1, due March 1, 2019 (Convexity, Python Setup)

Convexity

Solve Exercises 1, 2, 3, 4, 7, 8 from the lecture notes.

Getting Started with Python

Follow the Python setup tutorial `python_setup_tutorial.md` provided on our `github` repository here:

github.com/epfml/OptML_course/tree/master/labs/ex01/

After you are set up, clone the repository.

To get familiar with vector and matrix operations using NumPy arrays, you can go through the `numpy_primer.ipynb` notebook in the folder `/labs/ex01`. For computational efficiency, explicit `for`-loops should be avoided in favor of NumPy's built-in commands. These commands are vectorized and thoroughly optimized, and bring the performance of numerical Python code (like for e.g. Matlab) closer to lower-level languages like C.