

Problem Set 1, March 2, 2018 **(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 or download the repository, and start by filling in the template notebook in the folder `/labs/ex01`.

To get more familiar with vector and matrix operations using NumPy arrays, it is also recommended to go through the `npprimer.ipynb` notebook in the same folder. For computational efficiency of typical operations in machine learning applications, it is very beneficial to use NumPy arrays together with vectorized commands, instead of explicit for loops. The vectorized commands are better optimized, and bring the performance of Python code (and similarly e.g. for Matlab) closer to lower level languages like C.