TRƯỜNG ĐẠI HỌC KINH TẾ QUỐC DÂN
KHOA TOÁN KINH TẾ

Machine Learning

PART II

Instructor: **Nguyen Thanh Tuan**

TA: **To Duc Anh**

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Make sure your submission is either in notebook (.ipynb) or LATEXformat. You can install jupyter notebook down to your machine, or Google Colab so you dont have to care about managing virtual environment.

Submit the first three ex with LATEX, the last one with Jupyter Notebook.

Thank you! Ask the TA if you have any concern

Problem 1

Normally, building Ensemble model will be based on Decision Tree. What are the reasons for this, please explain.

Problem 2

Why do we use Decision Tree as weak learner when constructing Gradient Boosting?

Problem 3

Re-construct the loss of GBDT, visualize if you can.

Problem 4

Implement GBDT, you can use all weak learner from SKlearn.

(Hint: use a loop could solve your concern ;))