n this homework, you will use the following models:

(1) google/gemma-1.1-2b-it:

- (A) Use LoRA to fine-tune the model.  
- (B) Use a parameter-efficient fine-tuning method other than LoRA.

(2) Select a model from the MTEB benchmark (<https://huggingface.co/spaces/mteb/leaderboard)>:

- Fine-tune the model using QLoRA.

**Optional (Task 3):**

- Use any large model for zero-shot or few-shot classification.

This homework will also serve as your final submission for the Kaggle competition.

The top 5 students in Kaggle Competitionacross both sections will receive 2 bonus points.