Homework 4

Deadline: 11th December, 2022

Monday 26$^{\text{th}}$ December, 2022

1. (3pts) Proof Theorem 10.8 in Lecture 10. You can check reference [2] in the lecture.

2. (3.5 pts) Try to use the Opacus library to implement the DP-SGD algorithm for some deep learning tasks in PyTorch. You can find a tutorial at `https://opacus.ai/`. Write a report for your experimental setting and results.

3. (3.5 pts) Try to use the Tensorflow Privacy to implement the DP-SGD algorithm for some deep learning tasks in Tensorflow. You can find a tutorial at `https://www.tensorflow.org/responsible_ai/privacy/guide`. Write a report for your experimental setting and results.