

EPISTEMOLOGY AND THEORY OF MACHINE LEARNING
EXERCISE SET #3

- (1) Chapter 4, exercise 1 (pp. 58-59)

Hint for the direction $1.\Rightarrow 2.$: upper bound the expectation by two weighted probabilities.

Hint for the direction $2.\Rightarrow 1.$: use Markov's inequality,

$$\mathbb{P}[Z \geq a] \leq \frac{\mathbb{E}[Z]}{a}$$

for all $a \geq 0$.

- (2) Chapter 5, exercise 1 (p. 66).