Pattern Recognition
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Exercises

Theory Sheet 5

Remark:

- Submit your solution until the given deadline via OLAT.
- **Important note, valid for all exercise sheets:** An extension of the deadline can not be accepted since template solutions will be made available.

Exercise T-5.1: Maximum-likelihood estimation for exponential distribution

You are given the exponential distribution

$$f_X(x|\Theta) = f_X(x|\lambda) = \lambda e^{-\lambda x}$$

defined for $x > 0$ and $\lambda > 0$. Mathematically determine the Maximum-likelihood solution for parameter λ if you are given a set of training samples $D = x_1, x_2, ..., x_n$.