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Numerical Methods in Informatics - Exercise 2

Hand out: 19.10.2022 - Due to: 01.11.2022

Please upload your solutions to the Olat system.

Practice

2.1 Matrix Factorization and Determinants

a) (20 Min, 5 Points) Matrix Factorization

Please implement the function [lu(A)] in backend.py. The function takes a matrix as an input and returns the matrices P, L and U with $P \cdot A = L \cdot U$. This function should not change the input A.

b) (20 Min, 5 Points) Determinants

Please implement the function determinant(A) in backend.py. The function takes a matrix as an input and returns the determinant of the given matrix.

Handing in:

Please only include your backend.py in your hand in.