Section 5.5. Factorizations of Matrices

Note. In this small section, Gentle reviews and the matrix factorizations already covered and mentions those to be covered in the remainder of this chapter.

Note. We have seen or will soon see the following matrix factorizations:

- full rank factorization (for general matrices; Section 3.3),

- diagonal or similar canonical factorization (for diagonalizable matrices; Section 3.8),

- orthogonally similar factorizations (for symmetric matrices; Section 3.8),

- singular value decomposition (for general matrices; Section 3.8),

- square root factorization (for nonnegative definite matrices; Section 3.8),

- LU factorization and LDU factorization (for nonsingular definite matrices and others; Section 5.6),

- QR factorization (for general matrices; Section 5.7), and

- Cholesky factorization (for nonnegative definite matrices; Section 5.9).

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