Choleski decomposition, QR Decomposition

# Choleski decomposition

Choleski decomposition used for optimized matrix decomposition and fast search of eigenvalues and eigenvectors. ONLY USE for self-adjoint, positive definite matrices.

is self-adjoint, positive definite

diagonal part of

is adjoint matrix of

## Example:

# QR Decomposition

is regular matrix

is orthonogal matrix

is upper triangular matrix with positive diagonal

Compute Grand Smith Orthogonality (03 Lesson)

Calc R matrix:

## Example:

I. Gram Smidt orthogonal process

I.I. Calc

I.II. Calc

I.III. Calc

II.I. Calc .

II.II. Calc

II.III. Calc

II. Make Q matrix

III. Calc R matrix