

$A_{n \times n}$ MATRISE

$$A^T = A$$

A SYMMETRISK

$$\det(\lambda I - A) = (\lambda - \lambda_1)^{s_1} (\lambda - \lambda_2)^{s_2} \dots (\lambda - \lambda_k)^{s_k}$$
$$s_1 + s_2 + \dots + s_k = n$$

$$\lambda_i \in \mathbb{R}, \forall i$$

$$\dim(E_{\lambda_i}) = s_i$$

$$\{\vec{v}_{i1}, \vec{v}_{i2}, \dots, \vec{v}_{is_i}\}$$

ORTONORMAL BASIS FOR E_{λ_i}

$$A = PDP^{-1}$$

DIAGONALISERBAR

$$\langle \vec{u}, \vec{v} \rangle = 0$$

$$\forall \vec{u} \in E_{\lambda_i}, \forall \vec{v} \in E_{\lambda_j} \quad (i \neq j)$$

P ORTOGONAL

$$A = PDP^T$$