

Lecture - 27

26:38

- Positive definite Matrix (Tests)
- Tests for Minimum ($x^T A x > 0$)
- Ellipsoids in \mathbb{R}^n

$$A = \begin{bmatrix} a & b \\ b & c \end{bmatrix}$$

① $\lambda_1 > 0$ & $\lambda_2 > 0$

② $a > 0$ & $ac - b^2 > 0$

③ Pivots $a > 0$ $\frac{ac - b^2}{a} > 0$

④ $x^T A x > 0$

Min of
 $f(x_1, x_2, \dots, x_n)$

Matrix of 2nd derivation
is positive definite