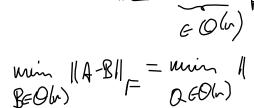
$$|| \leq \frac{u \cdot b \cdot ||}{e \cdot O(u)}$$



115-Q1/c=+-((5-Q)-(5-Q))

= tr(ZTZ)-24(ZTa) +tr(QTa) = n = const

$$F(\Sigma FQ) = \sum_{i=1}^{n} G_{i} f_{ii}$$

$$0 \in [-1,1]$$

$$0 \text{ and } f_{ii} = 1$$

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=> Q=T = hTBV

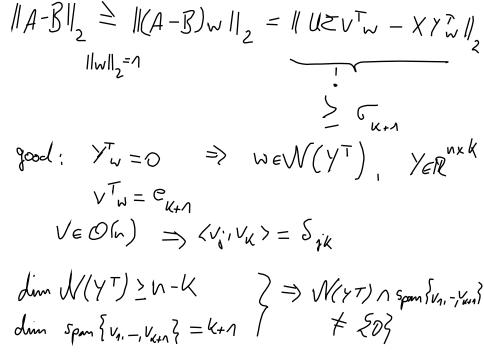
⇒ P = UV T

$$Z) \|A - A_{\kappa}\|_{2} = \| \left(\left(\sum - \sum_{\kappa} \right) V^{T} \right) \|_{2}$$

$$= \left(\left(\sum_{\sigma \in K+1} \left(\sum - \sum_{\kappa} \right) V^{T} \right) \|_{2}$$

$$= \left(\left(\sum_{\sigma \in K+1} \left(\sum - \sum_{\kappa} \right) V^{T} \right) \|_{2}$$

11A-811, 2 Cx+1 $B = \widetilde{U} \widetilde{Z} \widetilde{V}^{T} \qquad \widetilde{Z} = \begin{pmatrix} x \\ \delta x_{0} \end{pmatrix}$ $= \times Y^{T} \qquad \times \in \mathbb{R}^{m \times k}, \ Y \in \mathbb{R}^{n \times k}$



= C2 G2 + ... + FX+1 CK+1

 $\geq \sigma_{\kappa+n}^2 \left(c_n^2 + \dots + c_{\kappa+n}^2 \right) = \sigma_{\kappa+n}^2$

$$\|A - B\|_{F}^{2} = 4 - ((A - B)^{T} (A - B))$$

$$= 4 - (A^{T}A) - 2 + (A^{T}B) + 4 - (B^{T}B)$$

$$= \sum_{j=n}^{P} G_{j}^{2} = \sum_{j=n}^{2} S_{j}^{2} + \sum_{j=n}^{2} S_{j}^{2}$$

$$\geq \sum_{j=n}^{2} G_{j}^{2} - 2G_{j} S_{j}^{2} + \sum_{j=n}^{2} S_{j}^{2}$$

 $= \langle \sigma - \gamma \rangle$ $= \langle \sigma - \gamma \rangle$

3) =>
$$|| KKT conditions$$

$$C(X,\mu) = ||A \times - b||_{2}^{2} + \mu T(d - Cx)$$

$$\Rightarrow \nabla_{x}C(\hat{x},\mu) = 0$$

$$\nabla_{\mu}C(\hat{x},\mu) = 0$$

$$\nabla_{\mu}C(\hat{x},\mu) = 0$$

$$\nabla_{x}C(x,\mu) = 2A^{T}Ax - 2A^{T}b - C^{T}\mu = 0$$

$$A^{T}Ax - A^{T}b + C^{T}(-\frac{\mu}{2}) = 0$$

$$||Ax-b||_{2}^{2} = ||A(x-x)+Ax-b||_{2}^{2} = ||A(x-x)+Ax-b||_{2}^{2}$$

$$= ||A(x-x)||_{2}^{2} + 2(x-x)||A^{T}(Ax-b)||_{2}^{2}$$

$$= ||A(x-x)||_{2}^{2} + 2(x-x)||A^{T}(Ax-b)||_{2}^{2}$$

$$= ||A(x-x)||_{2}^{2} - 2(x-x)||A^{T}(Ax-b)||_{2}^{2}$$

= ((x-(x)) = =0 2 NAX-6112

× not unique
$$\Rightarrow$$
 $A(x-\lambda)=0$
 $A(x-\lambda)=0$
 \Rightarrow $A(x-\lambda)=0$

 $f_{\kappa}(t) = \alpha_{\kappa_0} + \alpha_{\kappa_n} t + \dots + \alpha_{\kappa_n}$ 4) SERM on [tx, bum] PK & Pn $\rho_{\kappa-n}^{(j)}(t_{\kappa}) = \rho_{\kappa}^{(j)}(t_{\kappa}) \qquad \forall j=0,m$ J=0: 010+010+011 tx + ... 010+7411 tx + ... + 0110 tx + ... + 0110 tx K = 1, -, M $C = \begin{pmatrix} c_1 - c_1 & 0 \\ 0 & c_M - c_M \end{pmatrix}$ C = (1 th ... th)