

$\pi(\text{supra}) : S(n, \theta)$
 $y(n, \theta) = x(n, \theta) * [h_0, h_1] = h_0 x(n, \theta) + h_1 x(n-1, \theta)$
 $= x_n^t(\theta) \cdot \underline{h}$

$$\begin{aligned}
 \min_h E \| S(n, \theta) - x_n^t(\theta) \underline{h} \|^2 &= \\
 &= E \left[\underline{h}^t x_n^t(\theta) \cdot x_n(\theta) \underline{h} + S^2(n, \theta) - 2 S(n, \theta) x_n^t(\theta) \underline{h} \right] = \\
 &= \underline{h}^t E \left[x_n^T(\theta) x_n(\theta) \right] \underline{h} + \underbrace{E[S^2(n, \theta)]}_{\text{avergajavara } h} - 2 E \left[S(n, \theta) x_n^T(\theta) \right] \cdot \underline{h} \rightarrow
 \end{aligned}$$

$$\begin{array}{l}
 S \rightarrow W \\
 X \rightarrow Y
 \end{array}$$

$$\rightarrow \min_h \left[\underbrace{\underline{h}^t}_{1 \times 2} \underbrace{R_{xx}}_{2 \times 2} \underline{h}_{2 \times 1} - 2 \underbrace{R_{sx}^t}_{1 \times 2} \underline{h}_{2 \times 1} \right]$$

$$\frac{\partial}{\partial \underline{h}} [] = 2 \underline{h}^t R_{xx} - 2 R_{sx}^t = 0 \Rightarrow \underline{h} = R_{sx}^t R_{xx}^{-1}$$

$$[r_{xx}(0) \ r_{01}]$$

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