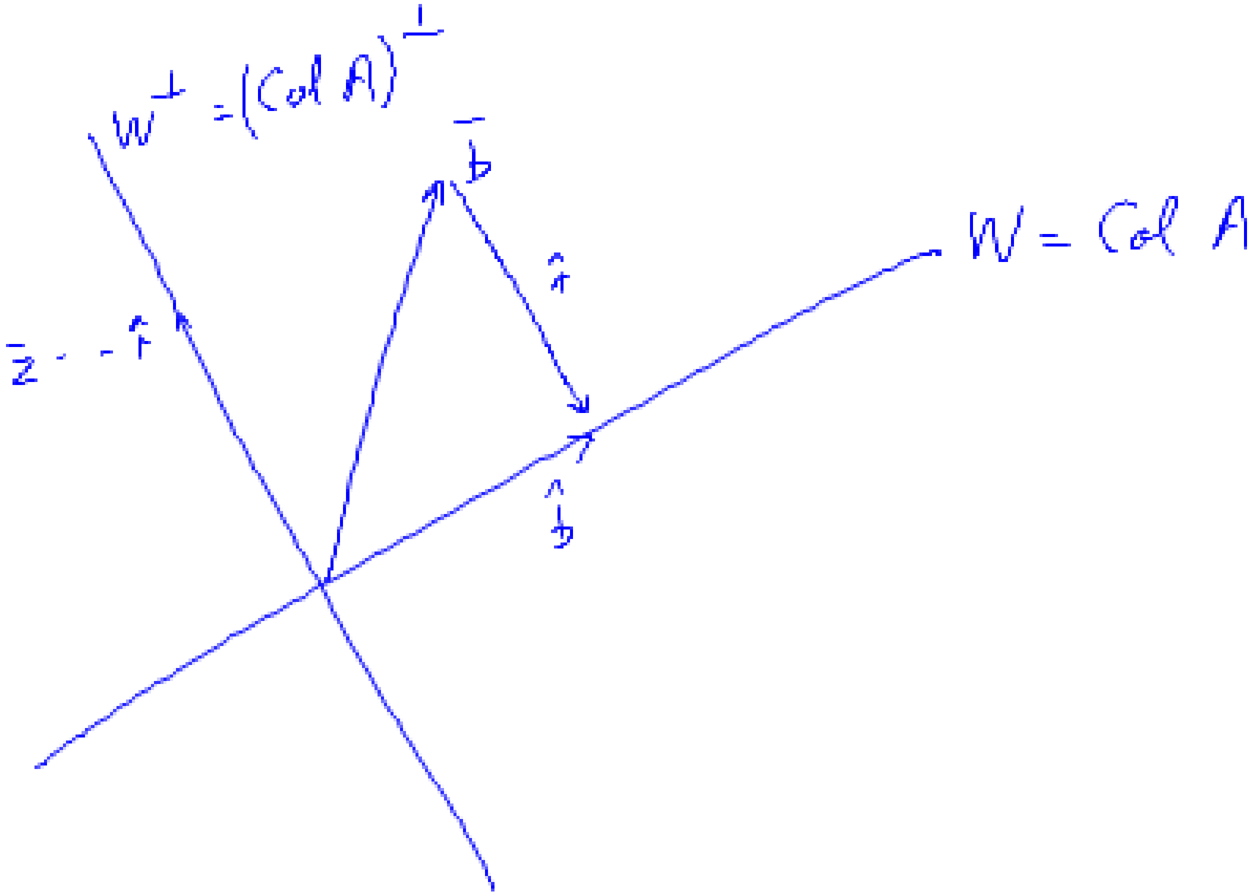

W⊥ = (Col A)⊥
b̄
r̂
W = Col A
z̄ = r̂
b̂

LØS $\quad B\bar{x} = \bar{c}$, $\quad B = A^T A$, $\quad \bar{c} = A^T \bar{b}$

B INVERTIBEL

FIND B^{-1}

$$\begin{bmatrix} B & I \end{bmatrix} \sim \begin{bmatrix} I & B^{-1} \end{bmatrix}$$

$n \times 2n$ MATRIX

$$\bar{x} = B^{-1}\bar{c}$$

$$\begin{bmatrix} B & \bar{c} \end{bmatrix} \sim \begin{bmatrix} I & \bar{d} \end{bmatrix} \qquad \bar{x} = \bar{d}$$

$n \times (n+1)$

$$A^T A = \begin{bmatrix} 1 & \dots & 1 \end{bmatrix} \begin{bmatrix} 1 \\ \vdots \\ 1 \end{bmatrix} = [n] = n$$

$$A^T \bar{b} = \begin{bmatrix} 1 & \dots & 1 \end{bmatrix} \begin{bmatrix} b_1 \\ \vdots \\ b_n \end{bmatrix} = b_1 + b_2 + \dots + b_n$$

NORMALLIGNING

$$n x = b_1 + \dots + b_n$$

$$x = \frac{b_1 + \dots + b_n}{n}$$

FIND LINIE $y = ax + b$

TÆT PÅ $(x_1, y_1) \ldots (x_n, y_n)$

$$\begin{bmatrix} 1 & x_1 \\ \vdots & \vdots \\ 1 & x_n \end{bmatrix} \begin{bmatrix} b \\ a \end{bmatrix} = \begin{bmatrix} y_1 \\ \vdots \\ y_n \end{bmatrix}$$

SØJLERNE LIN. UAFHÆNGIGE (MED MINDRE $x_1 = x_2 = \ldots = x_n$)

ENTYDIG MINDSTE KVADRATERS LØSNING