LSE 推導

$$Ax + b = y$$

$$|(Ax - b)|^2 = (Ax - b)^T (Ax - b)$$

$$= x^T A^T A x - 2b^T A^T A x + b^T b$$

$$\frac{d}{\partial x} = 2A^T A x - 2A^T b$$

$$A^T A x = A^T b$$

$$x = (A^T A)^{-1} A^T b$$