

$$C_1(x_1, y_1), C_2(x_2, y_2), C_3(x_3, y_3), C_4(x_4, y_4)$$

4

$$y - y_1 = \tan(\theta_1)(x - x_1)$$

$$a_i = -\tan(\theta_i), b_i = 1, c_i = \tan(\theta_i)x_i - y_i$$

$$\text{Corner} = [(x_1, y_1), (x_2, y_2), (x_3, y_3), (x_4, y_4)]$$

$$\text{angly} = [\theta_1, \theta_2, \theta_3, \theta_4]$$

$$A = []$$

$$b = []$$

for i in 1 to 4:

$$m_i = \tan(\text{angly}[i])$$

$$a_i = -m_i$$

$$b_i = 1$$

$$c_i = (m_i * x_i) - y_i$$

$$A^T A^{-1} A^T b$$

Localization
math.

$$A = [-\tan(\theta_1), 1], [-\tan(\theta_2), 1], [-\tan(\theta_3), 1], [-\tan(\theta_4), 1]$$

$$b = [y_1 - \tan(\theta_1)x_1, y_2 - \tan(\theta_2)x_2, y_3 - \tan(\theta_3)x_3, y_4 - \tan(\theta_4)x_4]$$

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$$x = \text{inv}(A) * b$$

(x, y)