

$$\begin{aligned}
 \mathbf{a}_{x_i}^\top \mathbf{p} &= [-X_i, -Y_i, -Z_i, -1, 0, 0, 0, 0, x_i X_i, x_i Y_i, x_i Z_i, x_i] \\
 &= \left[\begin{array}{c} -\mathbf{X}_i^\top, \\ \mathbf{0}, \\ x_i \mathbf{X}_i^\top \end{array} \right] \begin{bmatrix} \mathbf{A} \\ \mathbf{B} \\ \mathbf{C} \end{bmatrix}
 \end{aligned}$$

p_{11}
p_{12}
p_{13}
p_{14}
p_{21}
p_{22}
p_{23}
p_{24}
p_{31}
p_{32}
p_{33}
p_{34}

A
B
C