

$\begin{matrix} ? \\ ?? \\ ??? \\ p \end{matrix} [width = 4cm] cat_{down} FasterR - CNN$
 $\begin{matrix} ??? \\ Horizontal \\ dis- \\ par- \\ ity:?? \\ D_{h \times w} \\ H_{h \times w} \\ h_{floor} = \\ 1/d_{ceil}, h_{ceil} = \\ 1/d_{floor} \leftarrow \\ 1 \\ h \leftarrow \\ w \\ H[y, x] = \\ 1/D[y, x] \\ f_{floor})/(h_{ceil} - \\ h_{floor}) \end{matrix}$
 $\begin{matrix} Height \\ above \\ ground: WCRWCT?? \\ P_{h \times w} \\ H_{h \times w} \\ y \leftarrow \\ 1 \\ h \leftarrow \\ p = \\ WCRP[y, x] + \\ WCT \end{matrix}$
 $\begin{matrix} Angle \\ with \\ grav- \\ ity: zz? p_0 \vec{n} \\ p_0 k p_1, p_2, \dots p_k \\ \{p_i | i = \\ 0, 1, \dots, k\} Ax + \\ By + \\ Cz + \\ D = \\ 0 \\ p_0 \vec{n} = \\ [A, B, C]^T \\ p_0 k p_0 p_0 (x_0, y_0) S = \\ \{p_i | x_0 - \\ R \leq \\ x_i \leq \\ x_0 + \\ R, y_0 - \\ R \leq \\ y_i \leq \\ y_0 + \\ R\} Rz?? \\ P_{h \times w} \\ A_{h \times w} \\ y \leftarrow \\ 1 \\ h \leftarrow \\ w \\ C \vec{n} \\ P[y, x] \vec{n} = \\ WCR C \vec{n} + \\ WCT \\ \vec{n} \\ \vec{o} \vec{z}) / (|\vec{n}| |\vec{o} \vec{z}|)) \\ ?? \end{matrix}$
 $frame[HH AFrame][width = 4.5cm] hha_{frame}$

$frame[Heightabovegroundframe][width = 4.5cm] height_{frame}[Anglewithgravityframe][width = 4.5cm] angle_{frame} H$
 $\begin{matrix} ?? \\ U \\ V \\ ?? \\ U \\ R^{H \times W} \overset{U}{\times} \overset{\in}{\times} C W, H, C T_{\theta} \theta \theta \end{matrix}$

$$(1) \quad \mathcal{T}_{\theta} = \begin{bmatrix} \theta_{11} \theta_{12} \theta_{13} \\ \theta_{21} \theta_{22} \theta_{23} \end{bmatrix}$$

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