

$$P = \begin{bmatrix} \frac{f}{aspect} & 0 & 0 & 0 \\ 0 & f & 0 & 0 \\ 0 & 0 & \frac{far+near}{near-far} & \frac{2 \ near \ far}{near-far} \\ 0 & 0 & -1 & 0 \end{bmatrix} \quad \text{with } f = \cotangent(\frac{fovy}{2})$$