

$i$  is a column vector  $\in \mathbb{R}^3$

$$\begin{pmatrix} 1 & 1 & 1 \\ i & j & k \\ 1 & 1 & 1 \end{pmatrix} = \begin{pmatrix} 1 & 0 & 0 \\ 0 & 1 & 0 \\ 0 & 0 & 1 \end{pmatrix}$$

