

Training



$$X_1 = \begin{pmatrix} 111100100 \\ 011110100 \\ 000011100 \\ \vdots \\ 110011100 \\ 111011111 \end{pmatrix} \longrightarrow y_1 = 1 = \text{"cat"}$$



$$X_2 = \begin{pmatrix} 000100100 \\ 011100111 \\ 000011100 \\ \vdots \\ 011011111 \\ 110011111 \end{pmatrix} \longrightarrow y_2 = 0 = \text{"dog"}$$

Testing



$$X_{\text{new}} = \begin{pmatrix} 000101100 \\ 011100111 \\ 110011000 \\ \vdots \\ 011011011 \\ 010011111 \end{pmatrix} \longrightarrow ?$$