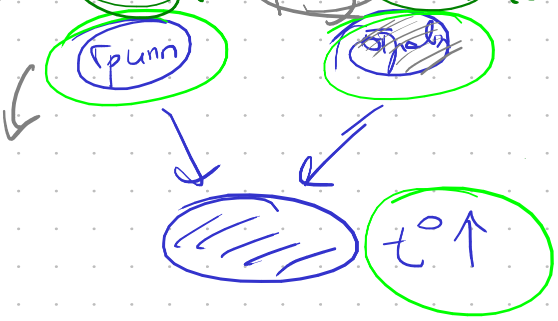
$p(\text{гр}) = \frac{1}{2} \cdot \frac{1}{100}$, $p(\text{отр}) = \frac{1}{2} \cdot \frac{1}{100}$



$$p(t^\circ\uparrow \mid \text{гр.}, \text{отр.}) = \begin{array}{c|cc} \text{отр.} \backslash \text{грипп} & 0 & 1 \\ \hline 0 & 0.1 & 0.8 \\ 1 & 0.8 & 0.9 \end{array}$$

$$p(t^\circ, \text{гр.}, \text{отр.}) = p(\text{гр.})\, p(\text{отр.})\, p(t^\circ \mid \text{гр.}, \text{отр.})$$

$t^\circ = 1$

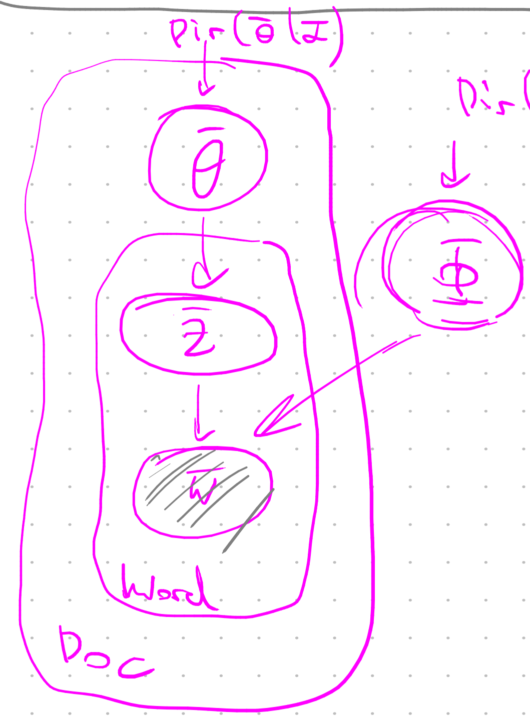
$$p(\text{гр.} \mid t^\circ) = \frac{\overset{0.85}{p(t^\circ \mid \text{гр.})}\, \overset{1/2}{p(\text{гр.})}}{\underbrace{-''-}_{0.85} + \underbrace{p(t^\circ \mid \neg\text{гр.})\, p(\neg\text{гр.})}_{0.45}} = \frac{85}{130}$$

$\frac{1}{2} \cdot 0.9$

$p(\text{отр.}) \cdot p(t^\circ \mid -, -)$

$$p(\text{гр} \mid t^\circ, \text{отр.}) = \frac{p(t^\circ, \text{отр} \mid \text{гр})\, p(\text{гр})}{\underbrace{-''-}_{\frac{1}{2} \cdot 0.9} + -''-} = \frac{9}{17}$$

$$p(t^\circ, \text{отр} \mid \neg\text{гр}) = \frac{1}{2} \cdot 0.8$$



$$p(\Theta, \Phi \mid W) =$$

$$= \int p(\Theta, \Phi, Z \mid W)\, dZ$$

SVD $\quad X \approx UV^T = (U \cdot A) \cdot (V \cdot A^{-1})^T$

$N \times M \quad (N \times k)(M \times k)$

$$x_{ij} = \underbrace{\sum_k u_{ik} v_{jk}}$$