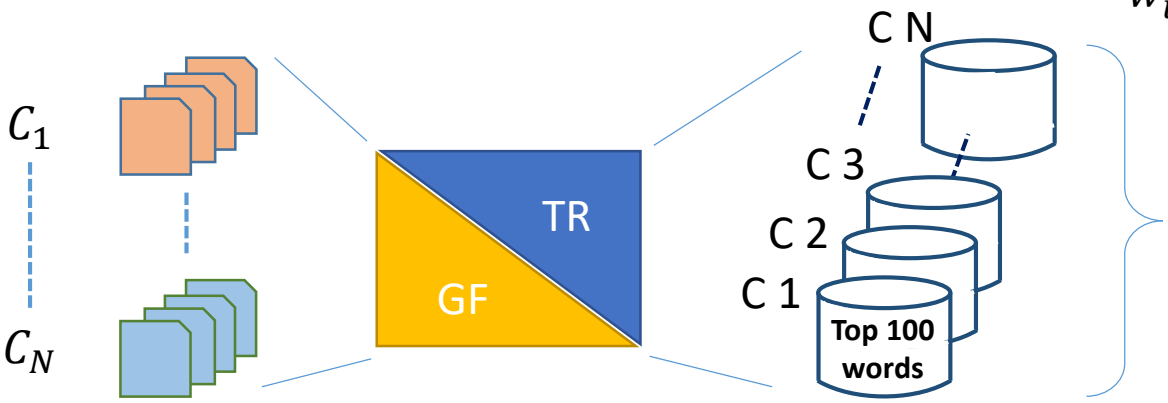


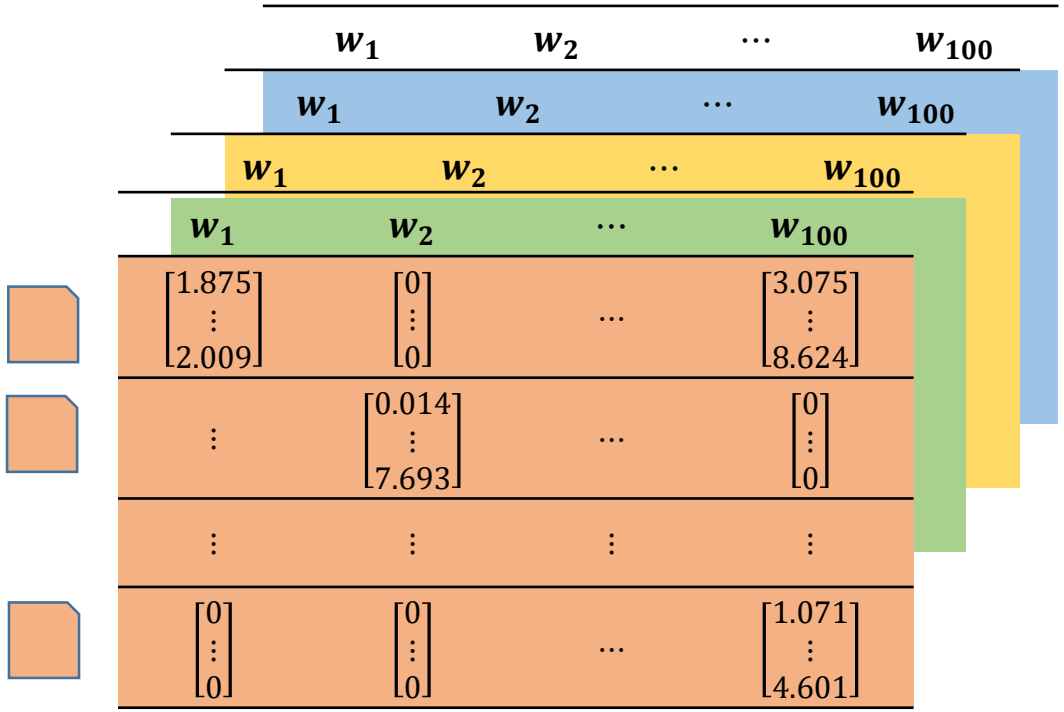
$$w_i^x = \frac{w_i^x}{\|w_i^x\|}$$

Voc GF/TR

GF/TR VOC embeddings

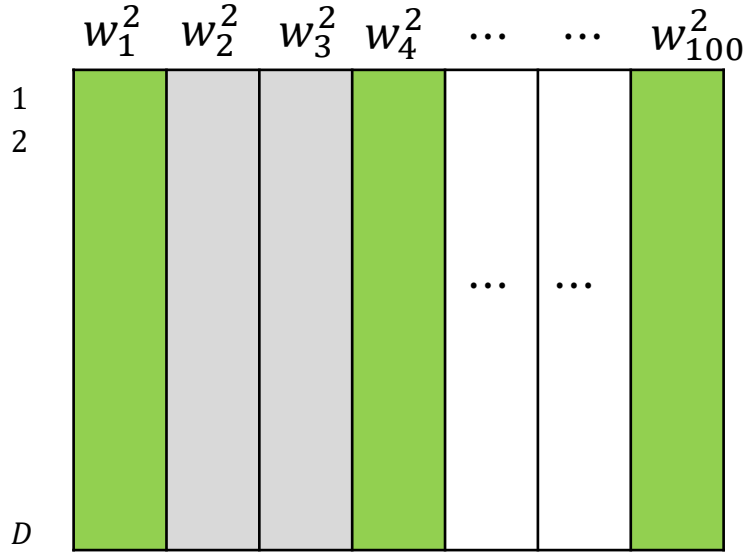
C_1	w_1^1	w_2^1	$\cdots$	w_{100}^1
C_2	w_1^2	w_2^2	$\cdots$	w_{100}^2
C_3	w_1^3	w_2^3	$\cdots$	w_{100}^3
$\vdots$				
C_N	w_1^N	w_2^N	$\cdots$	w_{100}^N

It may be the case that $w_i^x = w_j^y$



Train set

$d_j^2 =$



GF/TR VOC embeddings

C_1	w_1^1	w_2^1	$\cdots$	w_{100}^1
C_2	w_1^2	w_2^2	$\cdots$	w_{100}^2
C_3	w_1^3	w_2^3	$\cdots$	w_{100}^3
$\vdots$				
C_N	w_1^N	w_2^N	$\cdots$	w_{100}^N

$$V_x = \{w_v^x\}, v = 1,2,\dots,100$$

Test set

$$d_j = \left(w_1^j, w_2^j, \dots, w_k^j\right)$$

$$d_j^{V_x} = \{w \in d_j \mid w \in V_1 \cup V_2 \cdots \cup V_N\}$$

$$\mathcal{C}_i = \left\{V_x \mid w_i^x \in d_j^{V_x}\right\} ; i = 1,2,\dots,p = \left|d_j^{V_x}\right|.$$

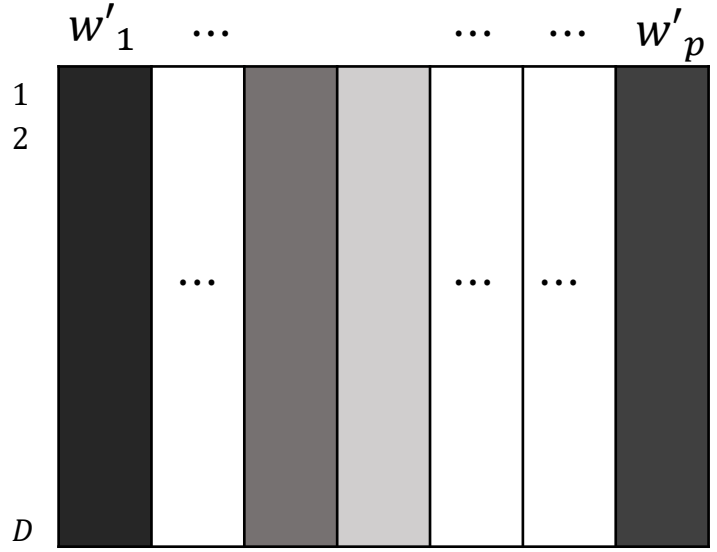
$$\alpha_i = \frac{\exp(-|\mathcal{C}_i|)}{\sum_{i=1}^{p} \exp(-|\mathcal{C}_i|)}$$

$$w'_i = \alpha_i w_i^x , i = 1,2,\dots,p ; w_i^x \in d_j^{V_x}$$

$$R(d_j) = \left(w'_1, w'_2, w'_3, \dots, w'_p\right)$$

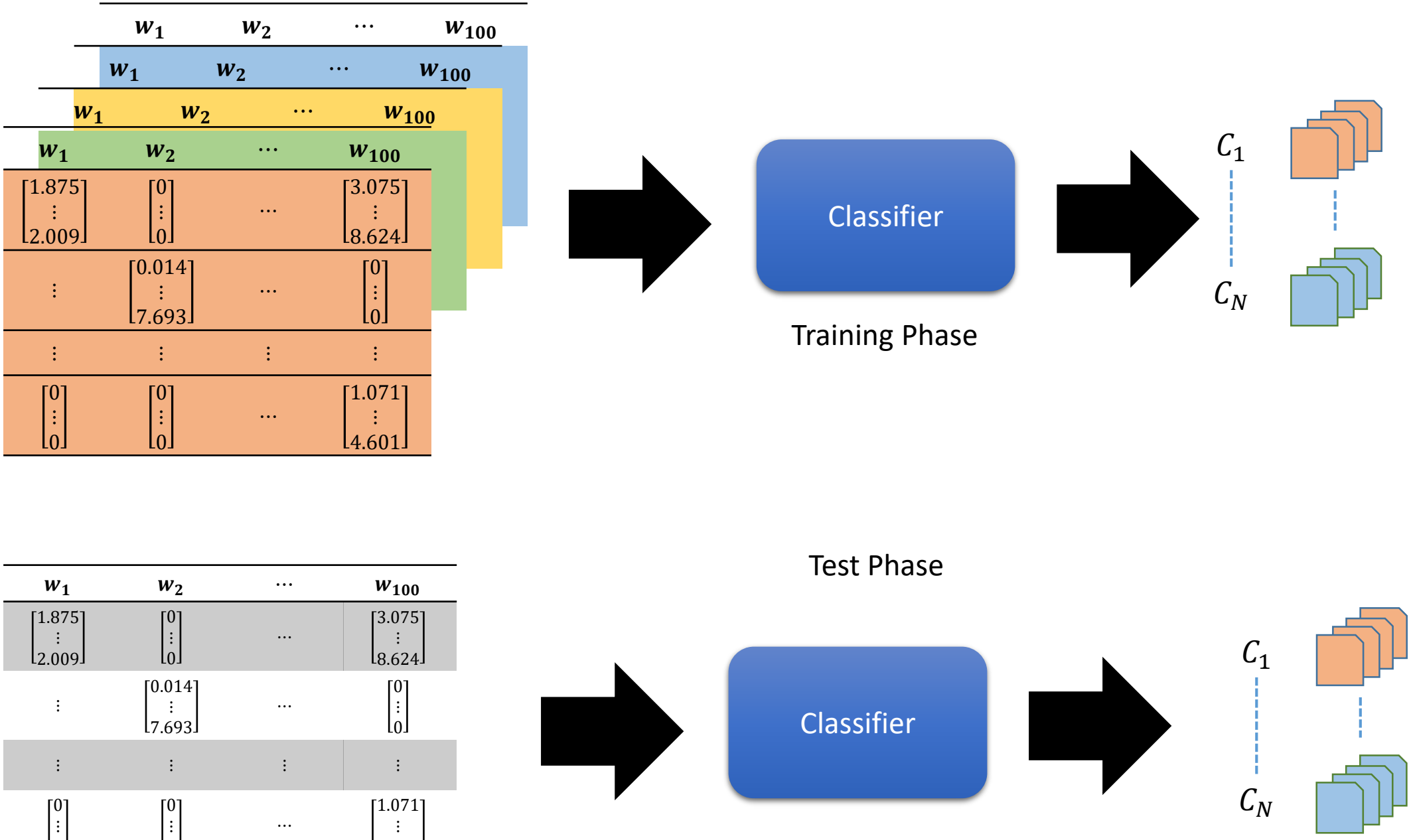
Ordenados por valor decreciente de α

$R(d_j) =$



Dos enfoques posibles:

1. Rellenar/truncar $R(d_j)$
2. $PCA\left(R\left(d_j\right)\right)$


w_1 w_2 ⋯ w_{100}
w_1 w_2 ⋯ w_{100}
w_1 w_2 ⋯ w_{100}
w_1 w_2 ⋯ w_{100}
$\begin{bmatrix}1.875\\ \vdots \\ 2.009\end{bmatrix}$ $\begin{bmatrix}0\\ \vdots \\ 0\end{bmatrix}$ ⋯ $\begin{bmatrix}3.075\\ \vdots \\ 8.624\end{bmatrix}$
$\vdots$ $\begin{bmatrix}0.014\\ \vdots \\ 7.693\end{bmatrix}$ ⋯ $\begin{bmatrix}0\\ \vdots \\ 0\end{bmatrix}$
$\vdots$ $\vdots$ $\vdots$ $\vdots$
$\begin{bmatrix}0\\ \vdots \\ 0\end{bmatrix}$ $\begin{bmatrix}0\\ \vdots \\ 0\end{bmatrix}$ ⋯ $\begin{bmatrix}1.071\\ \vdots \\ 4.601\end{bmatrix}$
Classifier
Training Phase
C_1
C_N
Test Phase
w_1 w_2 ⋯ w_{100}
$\begin{bmatrix}1.875\\ \vdots \\ 2.009\end{bmatrix}$ $\begin{bmatrix}0\\ \vdots \\ 0\end{bmatrix}$ ⋯ $\begin{bmatrix}3.075\\ \vdots \\ 8.624\end{bmatrix}$
$\vdots$ $\begin{bmatrix}0.014\\ \vdots \\ 7.693\end{bmatrix}$ ⋯ $\begin{bmatrix}0\\ \vdots \\ 0\end{bmatrix}$
$\vdots$ $\vdots$ $\vdots$ $\vdots$
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Classifier
C_1
C_N