* **Ensemble of classifiers**

Let $c_1, ---, c_k$ are set of classifiers.
We check one of the parameter, say
accuracy 'f_i' to give ranking to give
ranking to classifiers.

Let on ranking, we got the following
ordering (in descending order).

$$c^*_{(1)} \geq c^*_{(2)} \geq -- \geq c^*_{(k)}$$

$$\downarrow \qquad \downarrow \qquad\qquad \downarrow$$

$$\varepsilon_1 \qquad \varepsilon_2 \qquad\qquad \varepsilon_k$$

weights

→ we find weights for the classifiers
after ordering in decreasing
order as follows :

$$T_1 = 1 \qquad \equiv \qquad T_j = \prod_{i=1}^{j-1} f_i$$

$$\text{for } j = 2, ---, k$$

Then weights are

$$\varepsilon_j = \frac{T_j^{\circ}}{\sum\limits_{j=1}^{J} T_j^{\circ}}$$

So we got

$$c^*_{(1)} > c^*_{(2)} \cdots > c^*_{(K)}$$

$$\downarrow \qquad\qquad \downarrow \qquad\qquad \downarrow$$

$$\varepsilon_1 \qquad\qquad \varepsilon_2 \qquad\qquad \varepsilon_K$$

Apply

$$\frac{\varepsilon_1 c^*_{(1)} + \varepsilon_2 c^*_{(2)} + \cdots + \varepsilon_K c^*_{(K)}}{1 + \prod\limits_{i=1}^{K} \varepsilon_i c^*_{(i)}}$$

for final prediction.