

K distinct classes
k predicted class

$$\begin{array}{c} \neg \\ S(c) \\ \subseteq \\ S(k) \end{array} \quad \forall c \neq k$$

Def:

$$h_c(S(c)) := \max_{s \in S(c)} h_c(s)$$

Prop:

$$\forall c \neq k, \forall c'$$

$$h_k(S(c)) \geq h_{c'}(S(c))$$

$$h_k(S^{(k)}) \geq h_{c'}(S^{(k)})$$

For any "counter-example", k is *still* the predicted class

