

# Bayes Risk Lower Bounds

- Intuitively, if  $I(\mathcal{P}, w)$  is small, then Bayes risk should be close to Null risk

$$\text{Bayes Risk} \geq 1 + \frac{I(\mathcal{P}, w) + \log(1 + R_0)}{\log(1 - R_0)}$$

# Mapping to Our Problem