

MACHINE LEARNING IN PHYSICS

LAB 02 / TUTORIAL 2

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Recap

The function,

$$D(x) \equiv \frac{p(x|1)}{p(x|1) + p(x|0)}$$

can be used to perform binary classification and is just as powerful as using the class probability when the class priors differ.

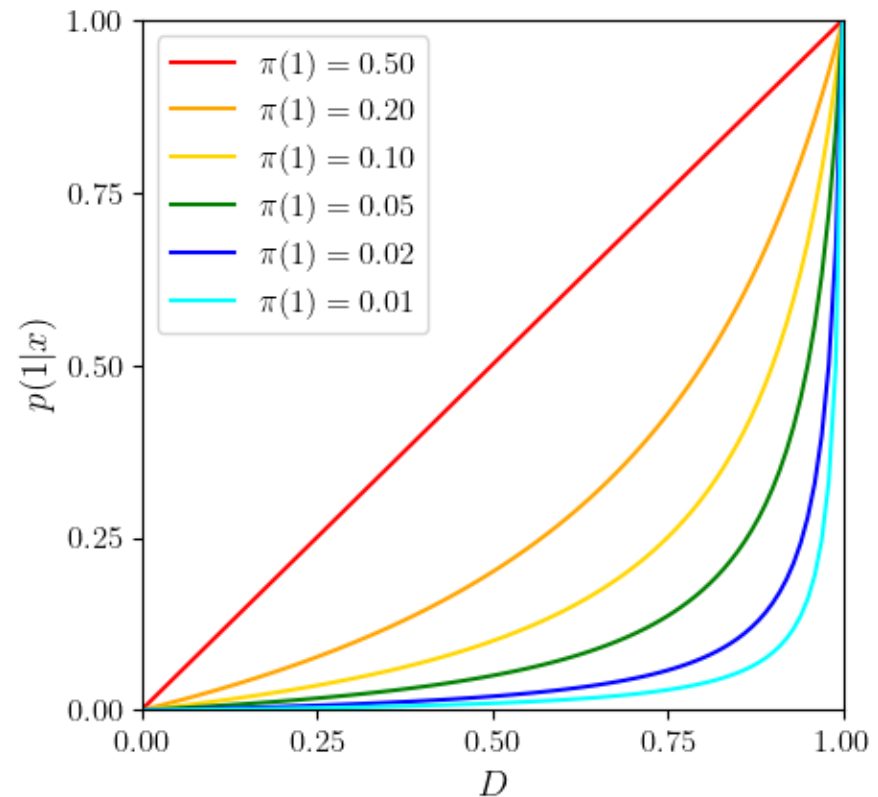
The two most common measures of performance are:

1. The **Receiver Operating Characteristic** (ROC) curve
2. And the **Area Under the Curve** (AUC).

Recap

$$p(1 | x) = \frac{D(x) \pi(1)}{D(x) \pi(1) + (1 - D(x))(1 - \pi(1))}$$

The dependence of $p(1 | x)$ on $D(x)$ for different values of the prior $\pi(1)$.



LAB02: ROC AND AUC