Contents

Chapter 1

The Probably Approximately Correct Learning Model

1.1 A Rectangle Learning Game

The objective of this game is to learn an unknown *target* (axis-aligned) rectangle $\mathcal{R} = [a, b] \times [c, d] \subset \mathbb{R}^2$. The player can gain information about $\mathcal{R}$ only by chosing random points according to some distribution $\mathcal{D}$ and asking the game whether they are inside $\mathcal{R}$
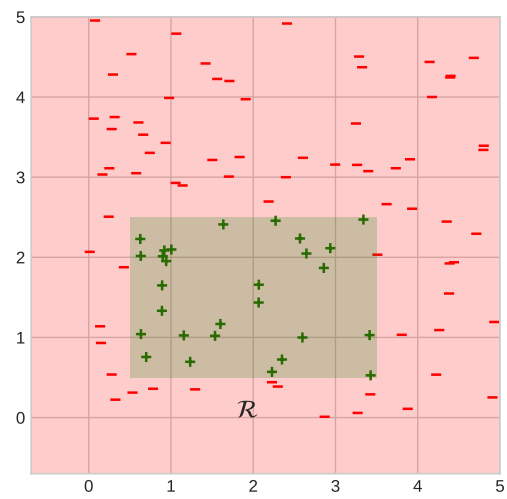
Figure 1.1: The target triangle along with a labeled sample of points