

A scatter plot illustrating a linear classification problem. The plot shows two classes of data points: purple circles and yellow circles. A diagonal line, representing the linear decision boundary, separates the two classes. The region to the left of this line is shaded purple, and the region to the right is shaded yellow. The purple data points are clustered in the purple region, while the yellow data points are clustered in the yellow region. There are a few outliers, such as a yellow point in the purple region and a purple point in the yellow region.

