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### 3. Margin Boundary

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Exercises due Feb 15, 2023 08:59 -03 Completed

## Margin Boundary



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The **decision boundary** is the set of points  $x$  which satisfy

$$\theta \cdot x + \theta_0 = 0.$$

The **Margin Boundary** is the set of points  $x$  which satisfy

$$\theta \cdot x + \theta_0 = \pm 1.$$

So, the distance from the decision boundary to the margin boundary is  $\frac{1}{\|\theta\|}$ .

## Margin Boundary 1

- ☐ The margin boundaries move closer to the decision boundary
- ☒ The margin boundaries move further away from the decision boundary
- ☐ The margin boundaries converge to a certain location no matter what

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