Optional Lab: Logistic Regression, Decision Boundary

Goals

In this lab, you will:

- Plot the decision boundary for a logistic regression model. This will give you a better sense of what the model is predicting.

In [1]:
```
import numpy as np
%matplotlib widget
import matplotlib.pyplot as plt
from lab_utils_common import plot_data, sigmoid, draw_vthresh
plt.style.use('./deeplearning.mplstyle')
```

Dataset

Let's suppose you have following training dataset

- The input variable `X` is a numpy array which has 6 training examples, each with two features
- The output variable `y` is also a numpy array with 6 examples, and `y` is either `0` or `1`

In [2]:
```
X = np.array([[0.5, 1.5], [1,1], [1.5, 0.5], [3, 0.5], [2, 2], [1, 2.5]])
y = np.array([0, 0, 0, 1, 1, 1]).reshape(-1,1)
```

Plot data

Let's use a helper function to plot this data. The data points with label $y = 1$ are shown as red crosses, while the data points with label $y = 0$ are shown as blue circles.