

## INF 5860 – Exercises on logistic regression

1. For logistic regression, what is the equation for the decision boundary?

a. 
$$h_{\theta}(x) = \frac{1}{1 + \exp^{-\theta^T x}} = 0$$

b. 
$$h_{\theta}(x) = \theta^T x = 0$$

c. 
$$h_{\theta}(x) = \theta^T x = 0.5$$

2. If  $y(i)=1$ , what should  $h_{\theta}(x(i))$  ideally be?

a. 0.5

b. 1

c. 0

3. For regularized linear regression, why is there no penalty on  $\theta_0$ ?