

CS189 Introduction to Machine Learning

CS189 Homework 0

By Hanze Yao

SID: 3033093286

August 27, 2019

Contents

1	Linear Algebra Review	1
1.1	Q(a)	1
1.2	Q(b)	1
1.3	Q(c)	1
2	Linear Regression and Adversarial Noise	2
2.1	Q(a)	2
2.2	Q(b)	2
2.3	Q(c)	2
3	Background Review	3
3.1	Q(a)	3
3.2	Q(b)	3
3.3	Q(c)	3
3.4	Q(d)	3
3.5	Q(e)	3
4	Your Own Question	4

1 Linear Algebra Review

1.1 Q(a)

$$\mathbf{u} = \begin{bmatrix} 1 \\ 2 \end{bmatrix}$$

$$\mathbf{v} = \begin{bmatrix} 2 \\ 3 \end{bmatrix}$$

$$\mathbf{M} = \mathbf{u} \mathbf{v}^\top = \begin{bmatrix} 2 & 3 \\ 4 & 6 \end{bmatrix}$$

1.2 Q(b)

1.3 Q(c)

2 Linear Regression and Adversarial Noise

2.1 Q(a)

2.2 Q(b)

2.3 Q(c)

3 Background Review

3.1 Q(a)

3.2 Q(b)

3.3 Q(c)

3.4 Q(d)

3.5 Q(e)

4 Your Own Question