

CS 2810

DAY 15

Mini PROJECT 1

① Show How To:

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② A FUN LINE BEST FIT APPLICATION

REVERSE ENGINEERING  
MENU PRICES FROM  
MANY BILLS

AKA

WHICH MOVIE GENRES  
ARE ASSOCIATED W/  
MORE REVENUE

How much does it cost to add sprinkles?



\$1



\$2.50



\$3

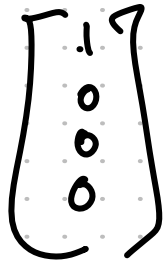


\$2

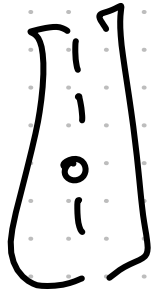
How much does it cost to add sprinkles?



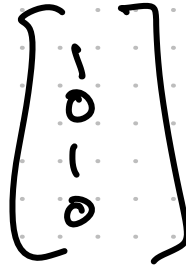
\$1



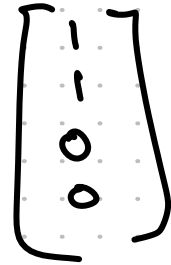
\$0.50



\$3



\$2



$X_0 = \text{Base}$

$X_1 = \text{Mint}$

$X_2 = \text{Straw}$

$X_3 = \text{Sprinkle}$

# LINE OF BEST FIT MODEL

$$\text{COST} = m_0 x_0 + m_1 x_1 + m_2 x_2 + m_3 x_3$$

Diagram illustrating the components of the cost function:

- BIAS** points to  $x_0$ .
- MINT** points to  $x_1$ .
- STRAW** points to  $x_2$ .
- SPRINKLE** points to  $x_3$ .

Annotations for the coefficients:

- STANDARD COST OF ICE CREAM** points to  $m_0$ .
- ADDED COST w/ MINT** points to  $m_1$ .
- ADDED COST w/ STRAW** points to  $m_2$ .
- ADDED COST w/ SPRINKLE** points to  $m_3$ .