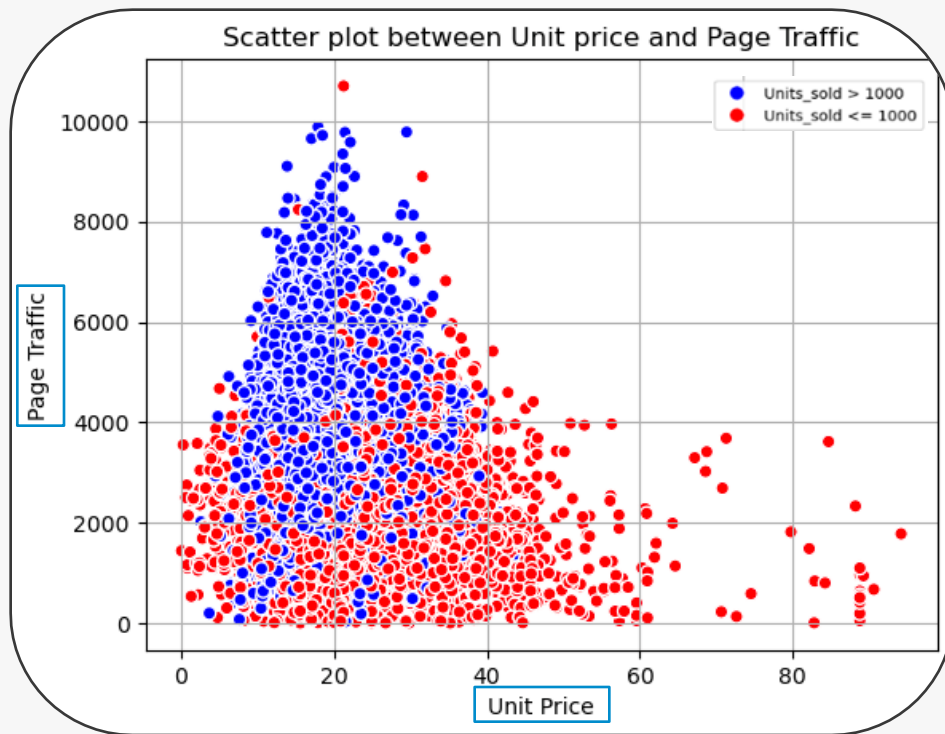




KNN Model

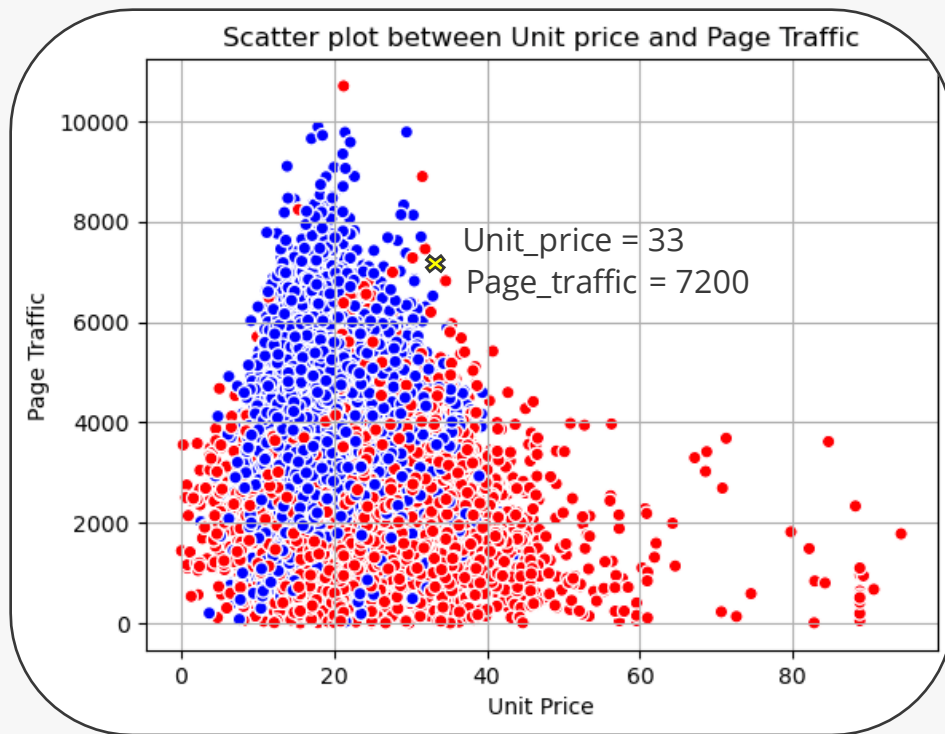
Building a KNN Model



Building a KNN Model



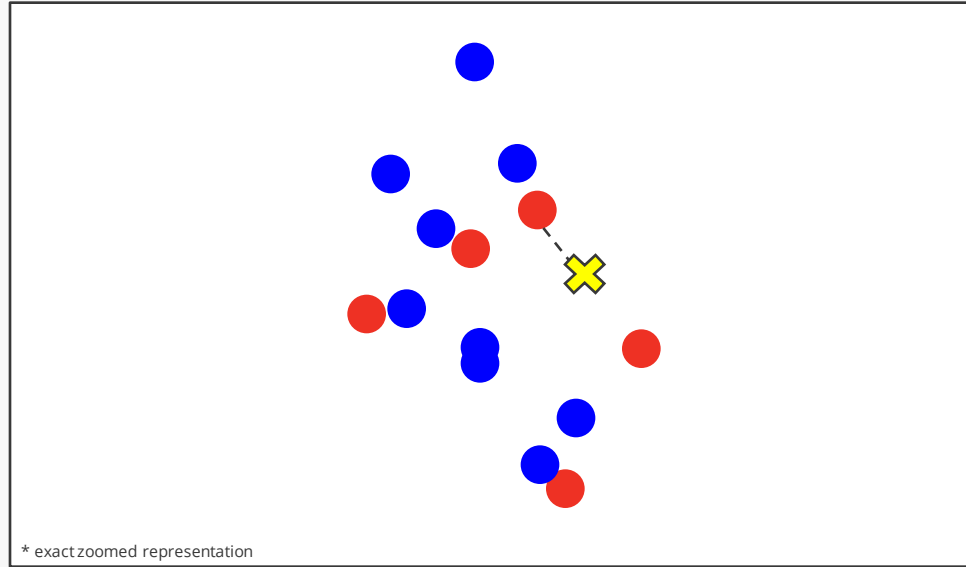
Building a KNN Model





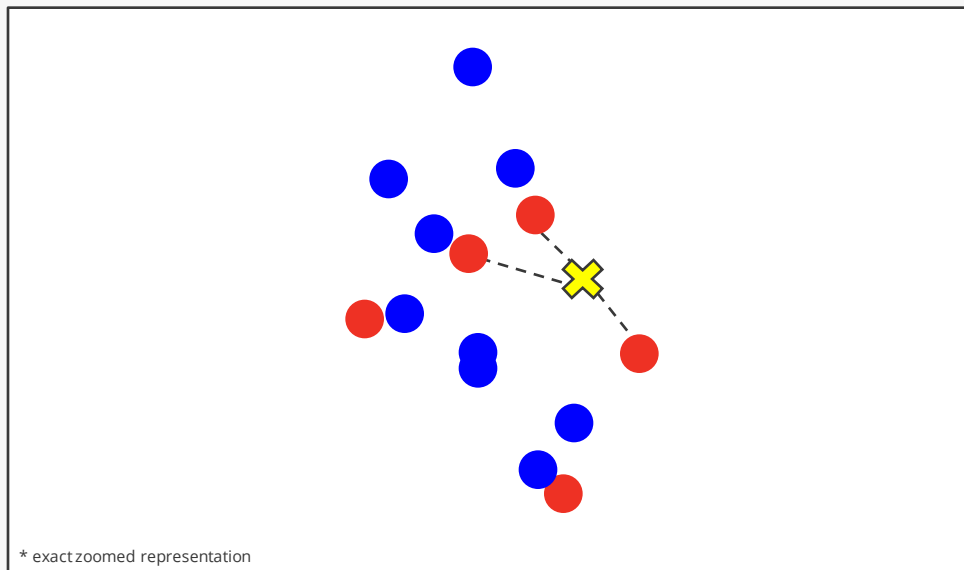
Will this product sell more than 1000 units?

Building a KNN Model



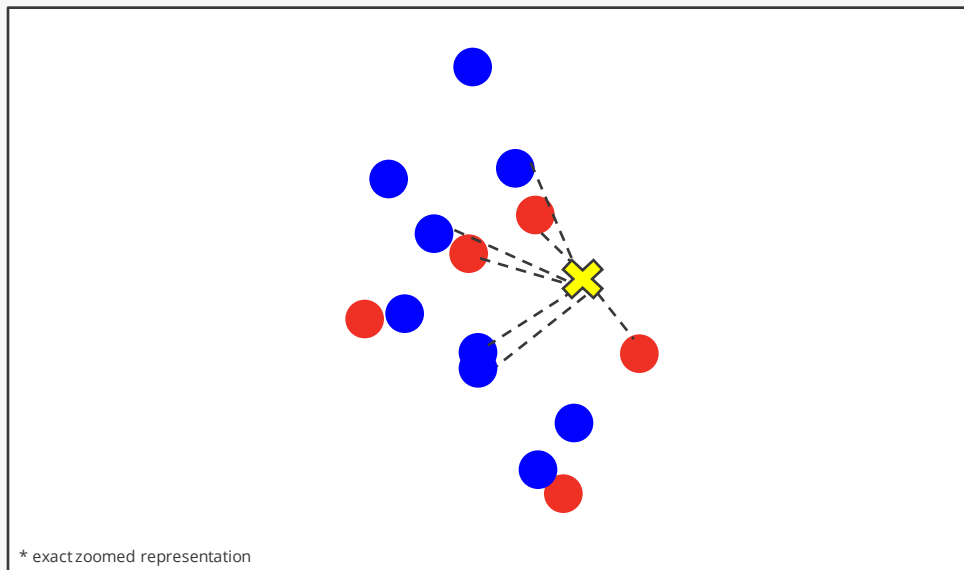
Nearest neighbors = 1

Building a KNN Model



Nearest neighbors = 3

Building a KNN Model

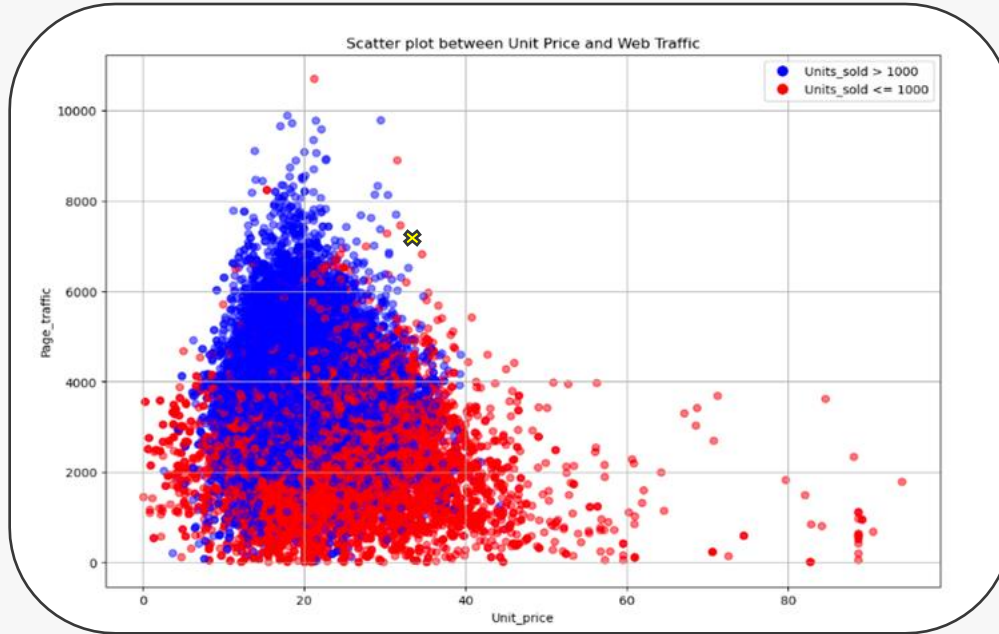


Nearest neighbors = 7



Calculate the distance from all the points to the new data point

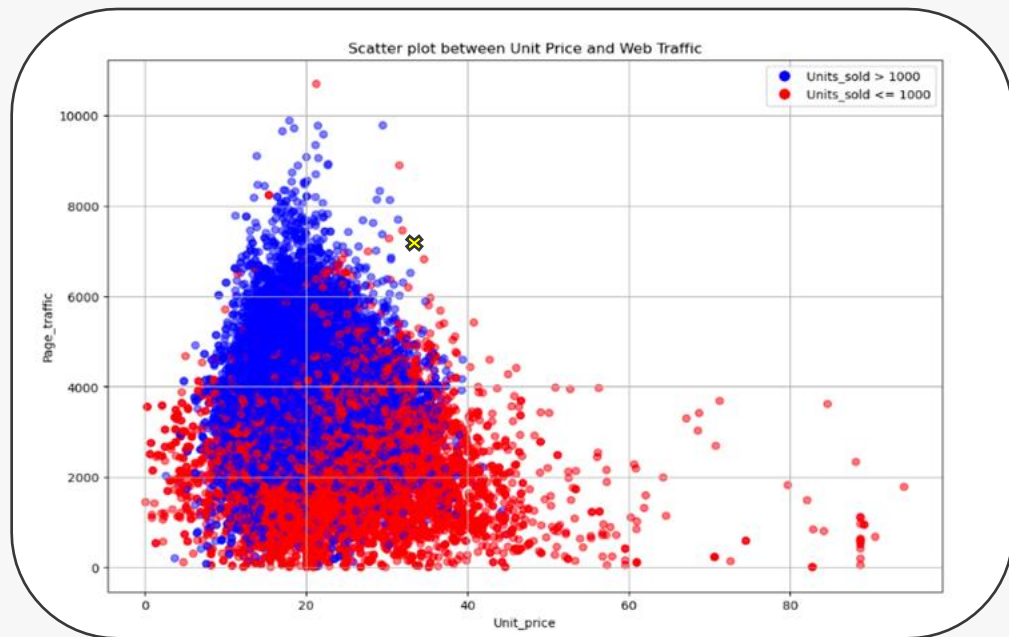
Building a KNN Model



Distances

2	Data_point_98
6	Data_point_8087
14	Data_point_12089
5	Data_point_5431
4	Data_point_1631
.....	

Building a KNN Model



Nearest neighbors (K) = 5

Distances

1

Data_point_1

1

Data_point_2

2

Data_point_3

2

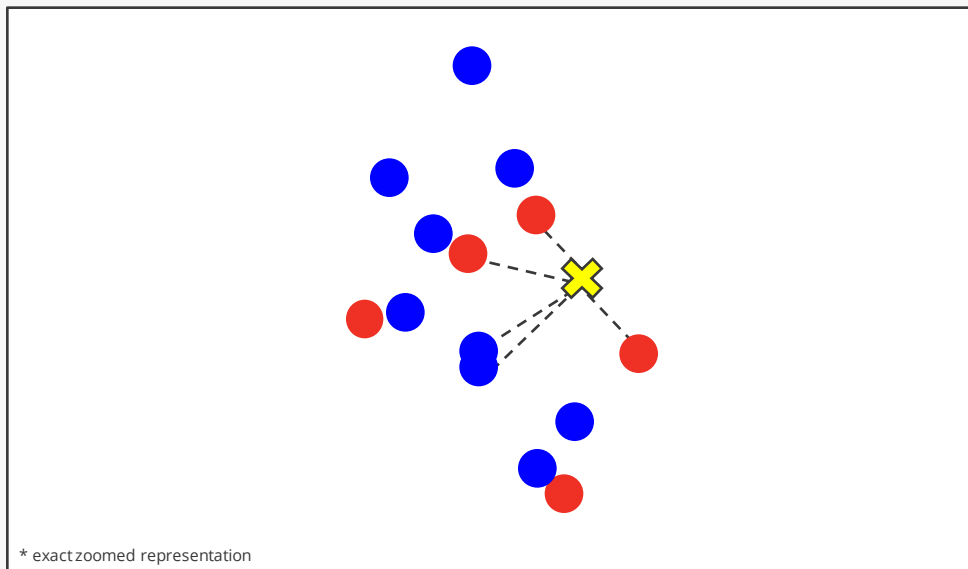
Data_point_4

3

Data_point_5

.....

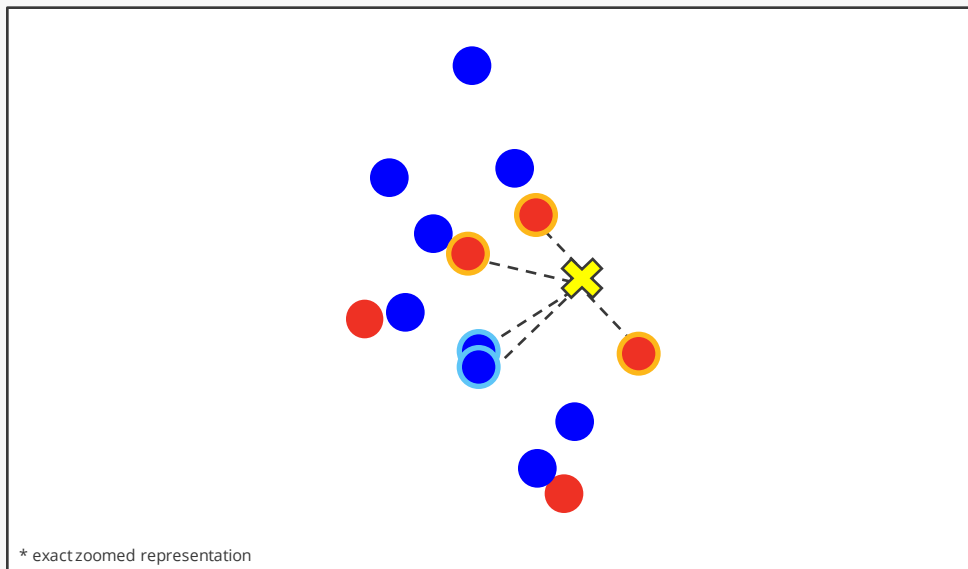
Building a KNN Model



Nearest neighbors (K) = 5

Distances	
1	Data_point_1
1	Data_point_2
2	Data_point_3
2	Data_point_4
3	Data_point_5
.....	

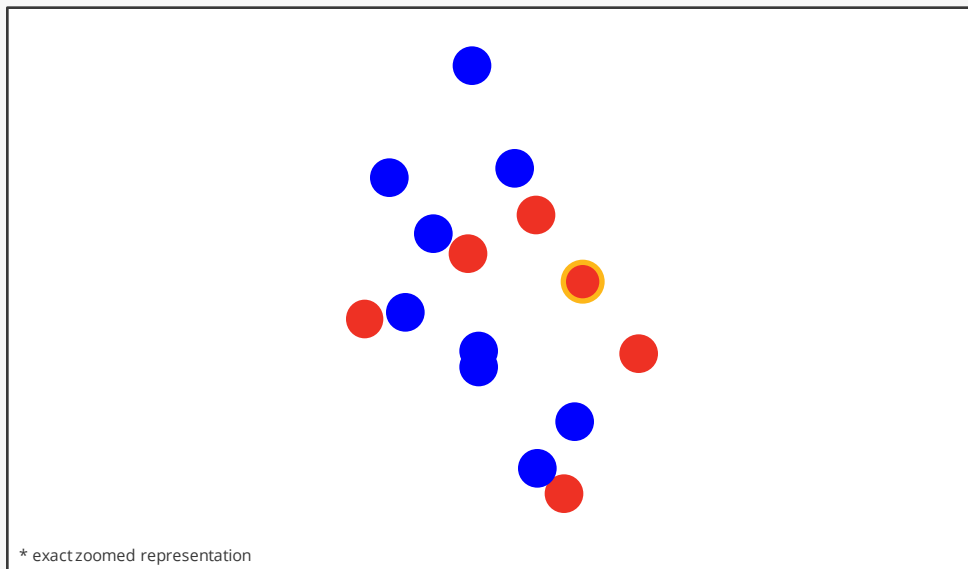
Building a KNN Model



Nearest neighbors (K) = 5

Take the "**mode**" of the labels

Building a KNN Model



Nearest neighbors (K) = 5



The new product will have
Units_sold < 1000

Building a KNN Model

Classification Problem



Mode for the new datapoint

Regression Problem



Mean for the new datapoint

 How did we choose $K=5$ here?