

W7. Category Prediction

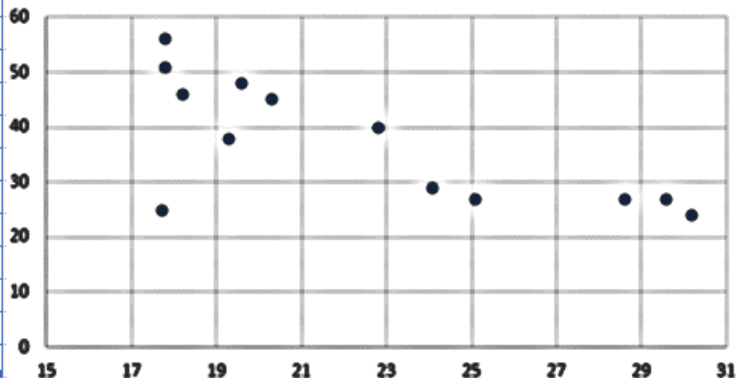
1. What is category prediction? Why do we need to use historical data?

2. What is K nearest neighbor?

3. Explain the steps of the KNN algorithm?

4. In Task 1 (bit.ly/CatPredYEP) predict if there will be fire when the temperature is 19.7C and the relative humidity is 28%? Fill in the information in the table. Show where is the unclassified data on the graph. Do it for K = 3 and K = 5. Is there a difference in the answer?

No	Temp. (X)	Humidity (%)	Fire (Class)	Distance
1	22.8	40	No	
2	29.6	27	Yes	
3	17.8	51	No	
4	19.3	38	No	
5	28.6	27	Yes	
6	17.8	56	Yes	
7	17.7	25	Yes	
8	18.2	46	Yes	
9	25.1	27	Yes	
10	30.2	24	No	
11	19.6	48	No	
12	24.1	29	No	
13	20.3	45	No	



K	Fire
3	
5	