

# DAILY ASSESSMENT FORMAT

Course:	machine-learning-with-python	Name:	Sachin Krishna Moger
Link:	<a href="https://cognitiveclass.ai/courses">https://cognitiveclass.ai/courses</a>	USN:	4AL17EC103
Org By :	IBM	Semester & Section:	6-B
Github Repository:	nksachin1228/Python	Date:	1806/2020

Progress on 18-06-2020

## • Topic Completed Today

**Intro to KNN**

X: Independent variable      Y: Dependent variable

	region	age	marital	address	income	ed	employ	retire	gender	reside	custcat
0	2	44	1	9	64	4	5	0	0	2	1
1	3	33	1	7	136	5	5	0	0	6	4
2	3	52	1	24	116	1	29	0	1	2	3
3	2	33	0	12	33	2	0	0	1	1	1
4	2	30	1	9	30	1	2	0	0	4	3
5	2	39	0	17	78	2	16	0	1	1	3
6	3	22	1	2	19	2	4	0	1	5	2
7	2	35	0	5	76	2	10	0	0	3	4
8	3	50	1	7	166	4	31	0	0	5	?

Value	Label
1	Basic Service
2	E-Service
3	Plus Service
4	Total Service

Our objective is to build a classifier, for example using the rows 0 to 7, to predict the class of row 8.

offers for individual prospective customers. This is a classification problem. That is, given the dataset, with predefined labels, we need to build a model to be used to predict the class of a new or unknown case. The example focuses on using demographic data, such as region, age, and marital status, to predict usage patterns. The target field, called custcat, has four possible values that correspond to the four customer groups, as follows: Basic Service, E-Service, Plus Service, and Total Service. Our objective is to build a classifier, for example using the rows 0 to 7, to predict the class of row 8. We will use a specific type of classification called K-nearest neighbor. Just for sake of demonstration, let's use only two fields as predictors - specifically, Age and Income, and then plot the customers based on their group membership. Now, let's say that we have a new customer, for example, record number 8 with a known age and income. How can we find the class of this customer? Can we find one of the closest cases and

# • Progress Report



