Graded Questions (Un-Supervised Learning – Clustering):

1. Introduction to clustering

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1. K-Means Clustering

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1. Executing K Means in Python

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**Comprehension**

Download the data set about the batting figures of batsmen in ODI matches given below. Analyse the data.

**[Cricket](https://cdn.upgrad.com/UpGrad/temp/3e60ecff-d177-4bbe-b637-98fb09001f0a/Cricket.csv" \o "Cricket.csv" \t "_blank)**

[file\_download](https://cdn.upgrad.com/UpGrad/temp/3e60ecff-d177-4bbe-b637-98fb09001f0a/Cricket.csv" \o "Cricket.csv" \t "_blank)**[Download](https://cdn.upgrad.com/UpGrad/temp/3e60ecff-d177-4bbe-b637-98fb09001f0a/Cricket.csv" \o "Cricket.csv" \t "_blank)**

Choose strike rate and average as the two factors on which you will cluster the data. You don’t need to clean the data. Just scale the data using the scale command and create the clusters.

**Pointers before you proceed:**

* **standardise** all parameters using standard\_scaler.fit\_transform() and save the output to a variable before you proceed. (check the K-Means code)
* **Choose random\_state=100** for running K-Means in Python with SKLearn.

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1. Hierarchical Clustering

**Graded Questions - I**

Below is given a set of 6 points which have to be clustered by agglomerative clustering method. Use the single linkage method for clustering.

|  |  |  |
| --- | --- | --- |
| **Point Label** | **X** | **Y** |
| A | 6 | 0 |
| B | 1 | 2 |
| C | 2 | 7 |
| D | 4 | 6 |
| E | 5 | 3 |
| F | 11 | 1 |

Answer the following questions based on the data given above.

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1. Other Forms of clustering : No Graded Questions