Iterative K-means algorithm: Takeaways

Syntax

- Transforming a DataFrame into a list:

```
df.values.tolist()
```

- Selecting the column with the minimum value in a row:

```
df.idxmin(axis=1)
```

The default `axis=0` returns the index of the minimum value in a column.

Concepts

- The K-means algorithm usually receives as an argument, besides the DataFrame, the `k` number of clusters to split and the maximum number of iterations.

- The algorithm will run until the centroids don't change from one iteration to the next, which means they'll not change again and continuing until the maximum number of iterations is a waste of time and computational power.

- If the algorithm does not find a convergence point, it will stop when it reaches the maximum number of iterations so it does not run indefinitely.