80

70

60

```
necessite-de-la-distribution-de-l-apprentissage-rapport
In [1]: import pandas as pd
In [2]: df = pd.read_csv('results/CLOUD_DATASIZE_1000.csv')
In [3]: df['dataset_size'] = df['dataset_size']/100000000
In [4]: df = df.round(2)
In [5]: df
            Unnamed: 0
                         time dataset rows dataset size num dataset size number of cores
                     0 128.16
                                  32561000
                                                                                       4
         1
                     1 79.85
                                  32561000
                                                       1000
                                                                   36.06
                                                                                       8
         2
                                  32561000
                                                       1000
                                                                   36.06
                                                                                      12
                     2 68.49
         3
                        62.44
                                  32561000
                                                       1000
                                                                   36.06
                                                                                      16
         4
                     4 65.48
                                  32561000
                                                       1000
                                                                   36.06
                                                                                      20
                        65.90
                                  32561000
                                                       1000
                                                                   36.06
                                                                                      24
         6
                     6
                        67.83
                                  32561000
                                                       1000
                                                                   36.06
                                                                                      28
                     7 63.90
                                  32561000
                                                       1000
                                                                   36.06
                                                                                      32
In [6]: df = df.round(2)
In [7]: dftemp = df[['number_of_cores', 'time', ]]
         dftemp.columns=['Number of cores', 'Training time (s)']
         dftemp.plot.line(
             x='Number of cores',
xlabel="Number of cores",
             ylabel="Training time (s)",
             title='Training time by number of cores',
             figsize=(15,10),
             fontsize=12)
Out[7]: <AxesSubplot:title={'center':'Training time by number of cores'}, xlabel='Number of cores', ylabel='Training time (s)'>
                                                           Training time by number of cores
           130
                                                                                                                   — Training time (s)
           120
           110
        Training time (s)
            90
```

```
In [8]: dftemp = df[['number_of_cores', 'dataset_size', 'time', ]]
dftemp.columns=['Number of cores', 'Dataset Size (GB)', 'Training time (s)']
             dftemp
```

20

Number of cores

25

30

15

10

Out[8]:		Number of cores	Dataset Size (GB)	Training time (s)
	0	4	36.06	128.16
	1	8	36.06	79.85
	2	12	36.06	68.49
	3	16	36.06	62.44
	4	20	36.06	65.48
	5	24	36.06	65.90
	6	28	36.06	67.83
	7	32	36.06	63.90