| ?        |  |              |  |                       |
|----------|--|--------------|--|-----------------------|
| $\vdash$ | 1 C:\Python27_new\python.exe "C:\Program |              | Files\JetBrains\PyCharm 2018.1               | 2018.1/helpers/pydev/ |
|          | pydev_run_in_console.py" 55994 55995     |              | D:/pfe/Projets/pfe/equilibrer_dataset_MIM.py | taset_MIM.py          |
|          | C/I                                      |              |  |                       |
| $\infty$ | 3 import sys; print('Python %s on %s'    | sys.         | (sys.version, sys.platform))                 |                       |
| 4        | sys.path.extend(['D:\\pfe\\              | /pfe','      | Projets/\pfe', 'D:/pfe/Projets/pfe'])        |                       |
| 2        | Ω  |              |  |                       |
| 9        | Running D:/pfe/Projets/pfe/              | er_datas     | equilibrer_dataset_MIM.py                    |                       |
| 7        | 7 count 2405                             |              |  |                       |
| ∞        | 8 unique 2                               |              |  |                       |
| 0        | 9 top True                               |              |  |                       |
| 10       | 0 freq 1642                              |              |  |                       |
| $\vdash$ | 1 Name: is_code_smell, dtype: object     |              |  |                       |
| 12       | 2 RandomUnderSampler by default          |              |  |                       |
| 13       | 3 number_of_callers_not_null is          | s_init       | call_external_methode                        | is_code_smell         |
| 14       | 4 count 1526                             | 1526         |  | 1526                  |
| 15       | 5 unique 1                               | $\vdash$     |  | N                     |
| 16       | 6 top True                               | False        | False  | True                  |
| 17       | 7 freq 1526                              | 1526         |  | 763                   |
| 18       | 8  |              |  |                       |
| 19       | 9 [4 rows x 7 columns]                   |              |  |                       |
| 20       | 0 RandomUnderSampler                     |              |  |                       |
| 21       | number_of_callers_not_null i             | s_init       | call_external_methode                        | is_code_smell         |
| 22       | count                                    | 1526         | 1526   | 1526                  |
| 23       | 3 unique 1                               | $\leftarrow$ |  | 2                     |
| 24       | 4 top True                               | False        | False  | True                  |
| 25       | 5 freq 1526                              | 1526         | 1526   | 763                   |
| 2        | 9  |              |  |                       |
| 27       | 7 [4 rows x 7 columns]<br>8 AllKNN       |              |  |                       |
|          |  |              |  |                       |

| is code smell              | 2405       | 7        | True  | 1642      |    |                      |                           | is_code_smell              | 764       | ~        | False | 763      |    |                      |            | is_code_smell              | 2405       | 2        | True  | 1642      |    |                       |                           | is_code_smell              | 2405       | 2        | True  | 1642      |
|----------------------------|------------|----------|-------|-----------|----|----------------------|---------------------------|----------------------------|-----------|----------|-------|----------|----|----------------------|------------|----------------------------|------------|----------|-------|-----------|----|-----------------------|---------------------------|----------------------------|------------|----------|-------|-----------|
| call external methode      | 2405       |          | False | 2405      |    |                      |                           | call_external_methode      | 764       |          | False | 764      |    |                      |            | call_external_methode      | 2405       | 1        | False | 2405      |    |                       |                           | call_external_methode      | 2405       | 1        | False | 2405      |
|                            | •          | :        | :     | :         |    |                      |                           | :                          | :         | :        | :     | :        |    |                      |            | :                          | :          | :        | :     | :         |    |                       |                           | :                          | :          | :        | :     |           |
| is init                    | 2405       | $\vdash$ | False | 2405      |    |                      |                           | is_init                    | 764       | $\vdash$ | False | 764      |    |                      |            | is_init                    | 2405       | $\vdash$ | False | 2405      |    |                       |                           | is_init                    | 2405       | $\vdash$ | False | 2405      |
| number of callers not null | count 2405 | unique 1 | top   | freq 2405 |    | [4 rows x 7 columns] | CondensedNearestNeighbour | number_of_callers_not_null | count 764 | unique 1 | top   | freq 764 |    | [4 rows x 7 columns] | TomekLinks | number_of_callers_not_null | count 2405 | unique 1 | top   | freq 2405 |    | [4  rows x 7 columns] | InstanceHardnessThreshold | number_of_callers_not_null | count 2405 | unique 1 | top   | freq 2405 |
| 29                         | 30         | 31 ı     | 32 t  | 33 1      | 34 | 35                   | 36                        | 37                         | 38        | 39 1     | 40 t  | 41 1     | 42 | 43                   | 44 .       | 45                         | 46         | 47 ı     | 48 t  | 49 1      | 20 | 51                    | 52                        | 53                         | 54         | 52 เ     | 56 t  | 57 1      |

| File - unknown | c.                                       |            |       |               |               |                   |    |
|----------------|--|------------|-------|---------------|---------------|-------------------|----|
| 58             |  |            |       |               |               |                   |    |
| 59 [4          | rows x 7 columns]                        |            |       |               |               |                   |    |
| 60 Nea         | NearMiss                                 |            |       |               |               |                   |    |
| 61             | number_of_callers_not_nul                | .l is_init | :     | call_external | al_methode is | s_code_smell      |    |
| 62 count       |  | 6 1526     | :     |               | 1526          | 1526              |    |
| 63 unique      | dne                                      | 1          | :     |               | $\vdash$      | 2                 |    |
| 64 top         | True                                     | le False   | :     |               | False         | True              |    |
| 65 freq        | q 1526                                   | 6 1526     | :     |               | 1526          | 763               |    |
| 99             |  |            |       |               |               |                   |    |
| 67 [4          | rows x 7 columns]                        |            |       |               |               |                   |    |
| 68 One         | OneSidedSelection                        |            |       |               |               |                   |    |
| 69             | number_of_callers_not_null               | .l is_init | :     | call_external | al_methode is | s_code_smell      |    |
| 70 count       | nt 764                                   | 764        | :     |               | 764           | 764               |    |
| 71 unique      | dne                                      | 1          | :     |               | $\vdash$      | 2                 |    |
| 72 top         | True                                     | le False   | :     |               | False         | False             |    |
| 73 freq        | 764                                      | 764        | :     |               | 764           | 763               |    |
| 74             |  |            |       |               |               |                   |    |
| 75 [4          | [4 rows x 7 columns]                     |            |       |               |               |                   |    |
| 76 PyD         | PyDev console: starting.                 |            |       |               |               |                   |    |
| 77             |  |            |       |               |               |                   |    |
| 78 Pytho win32 | Python 2.7.15 (v2.7.15:ca079a3ea3, win32 | 13, Apr 30 | 2018, | 16:30:26)     | [MSC v.1500   | 64 bit (AMD64)] o | on |
| 79             |  |            |       |               |               |                   |    |
|                |  |            |       |               |               |                   |    |