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**Classifier**     **KNeighborsClassifier**

Parameters     n_neighbors=1

|            | result1       | result2       | result3       | mean result  |
|------------|---------------|---------------|---------------|--------------|
| fit_time   | 5.52320743    | 5.55115509    | 5.41955829    | 5.497973603  |
| score_time | 807.7605839   | 809.2915378   | 810.0644186   | 809.0388467  |
| test_f1    | 0.27272727    | 0.27272727    | 0.18181818    | 0.24242424   |
| test_precision | 0.75      | 0.6           | 0.4           | 0.583333333  |
| test_recall | 0.16666667   | 0.17647059    | 0.11764706    | 0.153594773  |

**Classifier**     **KNeighborsClassifier**

Parameters     n_neighbors=3

|            | result1       | result2       | result3       | mean result  |
|------------|---------------|---------------|---------------|--------------|
| fit_time   | 5.43446922    | 5.48433638    | 5.30481577    | 5.40787379   |
| score_time | 824.6020501   | 823.2132363   | 824.5251393   | 824.1134752  |
| test_f1    | 0             | 0.1111111     | 0             | 0.037037033  |
| test_precision | 0         | 1             | 0             | 0.333333333  |
| test_recall | 0            | 0.05882353    | 0             | 0.019607843  |

**Classifier**     **KNeighborsClassifier**

Parameters     n_neighbors=5

|            | result1       | result2       | result3       | mean result  |
|------------|---------------|---------------|---------------|--------------|
| fit_time   | 5.62055898    | 5.66564155    | 5.62094331    | 5.635714613  |
| score_time | 824.454098    | 824.4648573   | 826.0111535   | 824.9767029  |
| test_f1    | 0             | 0             | 0             | 0            |
| test_precision | 0         | 0             | 0             | 0            |
| test_recall | 0            | 0             | 0             | 0            |

**SVC classifier parameters that returned a mean zero f1**

| C         | kernel | degree | gamma |
|-----------|--------|--------|-------|
| 0.0000001 | linear | N/A    | N/A   |
| 0.000001  | linear | N/A    | N/A   |
| 0.00001   | linear | N/A    | N/A   |
| 0.0001    | linear | N/A    | N/A   |
| 0.001     | linear | N/A    | N/A   |
| 0.0000001 | poly   | 2      | N/A   |
| 0.000001  | poly   | 2      | N/A   |
| 0.00001   | poly   | 2      | N/A   |
| 0.0001    | poly   | 2      | N/A   |
| 0.001     | poly   | 2      | N/A   |
| 0.01      | poly   | 2      | N/A   |
| 0.1       | poly   | 2      | N/A   |
| 1         | poly   | 2      | N/A   |
| 10        | poly   | 2      | N/A   |
| 0.0001    | poly   | 3      | N/A   |
| 0.001     | poly   | 3      | N/A   |
| 0.01      | poly   | 3      | N/A   |
| 0.1       | poly   | 3      | N/A   |
| 1         | poly   | 3      | N/A   |
| 10        | poly   | 3      | N/A   |

| | | | |
|---|---|---|---|
| 100 | poly | 3 N/A | |
| 0.0001 | poly | 4 N/A | |
| 0.001 | poly | 4 N/A | |
| 0.01 | poly | 4 N/A | |
| 0.1 | poly | 4 N/A | |
| 1 | poly | 4 N/A | |
| 10 | poly | 4 N/A | |
| 100 | poly | 4 N/A | |
| 0.0001 | poly | 5 N/A | |
| 0.001 | poly | 5 N/A | |
| 0.01 | poly | 5 N/A | |
| 0.1 | poly | 5 N/A | |
| 1 | poly | 5 N/A | |
| 10 | poly | 5 N/A | |
| 100 | poly | 5 N/A | |
| 1000 | poly | 5 N/A | |
| | | | |
| 0.0001 | rbf | N/A | auto |
| 0.001 | rbf | N/A | auto |
| 0.01 | rbf | N/A | auto |
| 0.1 | rbf | N/A | auto |
| 1 | rbf | N/A | auto |
| 10 | rbf | N/A | auto |
| | | | |
| 0.01 | sigmoid | | |
| 0.1 | sigmoid | | |
| 1 | sigmoid | | |

**Best (in terms of mean F1) SVC result I got**

| Parameters | C=100 | kernel=rbf | gamma = auto | |
|---|---|---|---|---|
| | result1 | result2 | result3 | mean result |
| fit_time | 17.39348722 | 17.49322 | 16.22461319 | 17.0371068 |
| score_time | 18.47786975 | 18.53571296 | 17.89639258 | 18.3033251 |
| test_f1 | 0.59259259 | 0.52173913 | 0.5 | 0.538110573 |
| test_precision | 0.88888889 | 1 | 0.63636364 | 0.841750843 |
| test_recall | 0.44444444 | 0.35294118 | 0.41176471 | 0.40305011 |