|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Sample Instance + Class  pCoSamp | Sample Only the Instances  pVbExtSamp13VT | Sample Instance + 2 Class  pVbExtSamp13VT | Sample Instance + Class  pVbExtSamp13VT | Do Not Sample  pVbExtSamp13VTLogitBoost  pVbExtSamp13 |
| Optdigits  rf = 0.2  T = 5000 | rb = 0.01, wrb = 1.1 | rs = 0.01, wrs = 1.1  rc = 1.1, wrc = 1.1 | rs = 0.05, wrs = 1.1  rc = 0.21, wrc = 1.1 | rs = 0.05, wrs = 1.1  rc = 0.2, wrc = 1.1 | rs = 1.1, wrs = 1.1  rc = 1.1, wrc = 1.1 |
| Pendigits  Rf = 0.2  T = 5000 | Rb = 0.01, wrb = 1.1 | rs = 0.01, wrs = 1.1  rc = 1.1, wrc = 1.1 | rs = 0.05, wrs = 1.1  rc = 0.21, wrc = 1.1 | rs = 0.05, wrs = 1.1  rc = 0.2, wrc = 1.1 | rs = 1.1, wrs = 1.1  rc = 1.1, wrc = 1.1 |
| Zipcode  Rf = 0.05  T = 5000 | Rb = 0.01, wrb = 1.1 | rs = 0.01, wrs = 1.1  rc = 1.1, wrc = 1.1 | rs = 0.05, wrs = 1.1  rc = 0.21, wrc = 1.1 | rs = 0.05, wrs = 1.1  rc = 0.2, wrc = 1.1 | rs = 1.1, wrs = 1.1  rc = 1.1, wrc = 1.1 |
| Letter4k  Rf = 0.2  T = 5000 | Rb = 0.01, wrb = 1.1 | rs = 0.01, wrs = 1.1  rc = 1.1, wrc = 1.1 | rs = 0.13, wrs = 1.1  rc = 0.08, wrc = 1.1 | rs = 0.05, wrs = 1.1  rc = 0.2, wrc = 1.1 | rs = 1.1, wrs = 1.1  rc = 1.1, wrc = 1.1 |
| Isolet  Rf = 0.0514  T = 5000 | Rb = 0.01, wrb = 1.1 | rs = 0.01, wrs = 1.1  rc = 1.1, wrc = 1.1 | rs = 0.13, wrs = 1.1  rc = 0.08, wrc = 1.1 | rs = 0.05, wrs = 1.1  rc = 0.2, wrc = 1.1 | rs = 1.1, wrs = 1.1  rc = 1.1, wrc = 1.1 |
| Mnist10k  Rf = 0.031  T = 5000 | Rb = 0.01, wrb = 1.1 | rs = 0.01, wrs = 1.1  rc = 1.1, wrc = 1.1 | rs = 0.05, wrs = 1.1  rc = 0.21, wrc = 1.1 |  |  |
| Timit.mfcc.winSz11  Rf = |  |  | Rs = 0.9150, wrs = 1.1  Rc = 0.011, wrc = 1.1 |  |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Sample Instance + 2 Class  pVbExtSamp13VT | Sample Instance + 2 Class  pVbExtSamp13AOSOVT | Sample Instance + All Class  pVbExtSamp13VT | Sample Instance + 2 Class  pAOSOLogitBoostV2 | CoSamp  pCoSampVT |
| Optdigits  rf = 0.2  T = 5000 | rs = 1.1, wrs =0.95  rc = 0.21, wrc = 1.1  err = 35 | rs = 1.1, wrs =0.95  err = 44 @ 505 | rs = 1.1, wrs =0.95  rc = 1.1, wrc = 1.1  err = 46 @ 401  time\_tr = 9.92 | rs = 1.1, wrs =0.95  err = 41 @ 1104 | Rb = 1.1, wrb = 0.95  err = 46 @ 400  time\_tr = 9.03 |
| Pendigits  Rf = 0.4  T = 5000 | rs = 1.1, wrs =0.95  rc = 0.21, wrc = 1.1  err = 78 | rs = 1.1, wrs =0.95  err =83 @ 507 | rs = 1.1, wrs =0.95  rc = 1.1, wrc = 1.1  err = 76 @ 408  time\_tr = 11.04 | rs = 1.1, wrs = 0.95  err = 83 @ 1124 | Rb = 1.1, wrb = 0.95  err = 78 @ 408  time\_tr = 10.60 |
| Zipcode  Rf = 0.05  T = 5000 | rs = 1.1, wrs =0.95  rc = 0.21, wrc = 1.1  err = 99 | rs = 1.1, wrs =0.95  err = 96 @ 955 | rs = 1.1, wrs =0.95  rc = 1.1, wrc = 1.1  err = 98 @ 717  time\_tr = 41.65 | rs = 1.1, wrs = 0.95  err = 101 @ 2065 | rb = 1.1, wrb = 0.95  err = 100 @ 720  time\_tr = 40.38 |
| Letter4k  Rf = 0.2  T = 5000 | rs = 1.1, wrs =0.95  rc = 0.08, wrc = 1.1  err = 1094 | rs = 1.1, wrs =0.95  err =1069@ 1486 | rs = 1.1, wrs =0.95  rc = 1.1, wrc = 1.1  err = 1016 @ 1063  time\_tr = 32.12 | rs = 1.1, wrs = 0.95  err = 1055 @ 5000 | rb = 1.1, wrb = 0.95  err = 1036 @ 1062  time\_tr = 27.34 |
| Isolet  Rf = 0.0514  T = 5000 | rs = 1.1, wrs =0.95  rc = 0.08, wrc = 1.1  err = 53 | rs = 1.1, wrs =0.95  err = 55 @ 888 | rs = 1.1, wrs =0.95  rc = 1.1, wrc = 1.1  err = 51 @ 629  time\_tr = 208.65 | rs = 1.1, wrs = 0.95  err = 53 @ 2226 | rb = 1.1, wrb = 0.95  err = 53@628  time\_tr = 213.25 |
| Mnist10k  Rf = 0.031  T = 5000 | rs = 1.1, wrs =0.95  rc = 0.21, wrc = 1.1  err = 2719 | rs = 1.1, wrs =0.95  err = 2008 @ 1618 | rs = 1.1, wrs =0.95  rc = 1.1, wrc = 1.1  err = 1904  time\_tr = 157.36 | rs = 1.1, wrs = 0.95  err = 2092 @ 3083 | rb = 1.1, wrb = 0.95  err = 1904 @ 1218  time\_tr = 161.61 |
| mnist  rf = 0.031  T = 5000 | rs = 1.1, wrs = 0.95  rc = 0.21, wrc = 1.1  err = 193 @ 5000 | rs = 1.1, wrs =0.95  err = 139 @ 5000 | rs = 1.1, wrs = 0.95  134 @ 4014 | rs = 1.1, wrs = 0.95  err = 163 @ 5000 |  |
| Timit.mfcc.winSz11  Rf = 0.02  T = 1000  J = 70 | rs = 1.1, wrs =0.95  Rc = 0.011, wrc = 1.1 | rs = 1.1 wrs = 0.95  err = 26899 @ 1000 | rs = 1.1, wrs=0.9  err = 26205 @ 1000 | rs = 1.1, wrs = 0.95  err |  |