AUC CI

## AUC

Here are the results of10 cross-validation AUCs

### Mean training

|  | Dt1 | Dt2 | Dt3 | Dt4 | Dt5 |
| --- | --- | --- | --- | --- | --- |
| Tstart2 | NA | 0.4562 | 0.7856 | 0.8140 | 0.8033 |
| Tstart3 | 0.5894 | 0.8153 | 0.8503 | 0.8114 | 0.8070 |
| Tstart4 | 0.9580 | 0.9000 | 0.8466 | 0.8384 | 0.8093 |
| Tstart5 | 0.8567 | 0.8525 | 0.8479 | 0.8123 | 0.8174 |
| Tstart6 | 0.8492 | 0.8686 | 0.8273 | 0.8219 | 0.8269 |
| Tstart8 | 0.8056 | 0.8192 | 0.8288 | 0.8221 | 0.8507 |

### Mean testing

|  | Dt1 | Dt2 | Dt3 | Dt4 | Dt5 |
| --- | --- | --- | --- | --- | --- |
| Tstart2\_test | NA | NA | 0.6347 | 0.6492 | 0.7339 |
| Tstart3\_test | NA | 0.7816 | 0.7235 | 0.7645 | 0.7645 |
| Tstart4\_test | NA | 0.7373 | 0.7805 | 0.7873 | 0.7843 |
| Tstart5\_test | 0.7643 | 0.8075 | 0.8300 | 0.8109 | 0.8160 |
| Tstart6\_test | 0.8529 | 0.8622 | 0.8321 | 0.8210 | 0.8220 |
| Tstart8\_test | 0.8076 | 0.8070 | 0.8195 | 0.8259 | 0.8559 |

To make the comparison easier, here is a table for (Training – Testing) AUC, where the positive value means the Training AUC is better than the Testing. It is expected that the Training AUC is better in most of the cases.

|  | Dt1 | Dt2 | Dt3 | Dt4 | Dt5 |
| --- | --- | --- | --- | --- | --- |
| Tstart2 | NA | NA | 0.1509 | 0.1648 | 0.0694 |
| Tstart3 | NA | 0.0338 | 0.1268 | 0.0469 | 0.0426 |
| Tstart4 | NA | 0.1627 | 0.0661 | 0.0511 | 0.0250 |
| Tstart5 | 0.0924 | 0.0450 | 0.0179 | 0.0014 | 0.0014 |
| Tstart6 | -0.0036 | 0.0064 | -0.0048 | 0.0009 | 0.0049 |
| Tstart8 | -0.0019 | 0.0123 | 0.0094 | -0.0038 | -0.0052 |

## SD

Not very surprising, Training AUC also have smaller SDs.

### SD training

|  | Dt1 | Dt2 | Dt3 | Dt4 | Dt5 |
| --- | --- | --- | --- | --- | --- |
| Tstart2 | NA | 0.0069 | 0.0713 | 0.0672 | 0.0550 |
| Tstart3 | 0.1728 | 0.0715 | 0.0563 | 0.0404 | 0.0264 |
| Tstart4 | 0.0431 | 0.0466 | 0.0310 | 0.0185 | 0.0138 |
| Tstart5 | 0.0859 | 0.0371 | 0.0288 | 0.0239 | 0.0167 |
| Tstart6 | 0.0331 | 0.0175 | 0.0164 | 0.0133 | 0.0108 |
| Tstart8 | 0.0178 | 0.0119 | 0.0096 | 0.0142 | 0.0184 |

### SD testing

|  | Dt1 | Dt2 | Dt3 | Dt4 | Dt5 |
| --- | --- | --- | --- | --- | --- |
| Tstart2\_test | NA | NA | 0.1579 | 0.1084 | 0.0565 |
| Tstart3\_test | NA | 0.1865 | 0.0953 | 0.0631 | 0.0293 |
| Tstart4\_test | NA | 0.0984 | 0.0807 | 0.0421 | 0.0394 |
| Tstart5\_test | 0.1310 | 0.0764 | 0.0424 | 0.0397 | 0.0306 |
| Tstart6\_test | 0.0587 | 0.0387 | 0.0272 | 0.0252 | 0.0171 |
| Tstart8\_test | 0.0287 | 0.0227 | 0.0160 | 0.0179 | 0.0258 |

### CI training

Dt1

Tstart2 Tstart3 Tstart4 Tstart5 Tstart6 Tstart8

2.5% NA 0.4512 0.8707 0.7366 0.7916 0.7708

97.5% NA 0.8843 0.9892 0.9699 0.8946 0.8217

Dt2

Tstart2 Tstart3 Tstart4 Tstart5 Tstart6 Tstart8

2.5% 0.4456 0.7261 0.8437 0.7914 0.8411 0.8016

97.5% 0.4665 0.9280 0.9648 0.8915 0.8981 0.8332

Dt3

Tstart2 Tstart3 Tstart4 Tstart5 Tstart6 Tstart8

2.5% 0.7204 0.7619 0.8054 0.7939 0.8020 0.8181

97.5% 0.9241 0.9282 0.8858 0.8825 0.8484 0.8474

Dt4

Tstart2 Tstart3 Tstart4 Tstart5 Tstart6 Tstart8

2.5% 0.7107 0.7499 0.8093 0.7668 0.8048 0.8081

97.5% 0.9046 0.8653 0.8666 0.8356 0.8373 0.8469

Dt5

Tstart2 Tstart3 Tstart4 Tstart5 Tstart6 Tstart8

2.5% 0.7236 0.7595 0.7930 0.7904 0.8127 0.8283

97.5% 0.8904 0.8408 0.8269 0.8365 0.8436 0.8804

### CI testing

Dt1

Tstart2\_test Tstart3\_test Tstart4\_test Tstart5\_test Tstart6\_test Tstart8\_test

2.5% NA 0.4689 0.4651 0.5936 0.7635 0.7639

97.5% NA 0.9527 0.9940 0.9810 0.9238 0.8546

Dt2

Tstart2\_test Tstart3\_test Tstart4\_test Tstart5\_test Tstart6\_test Tstart8\_test

2.5% 0.4328 0.4467 0.6279 0.6999 0.7995 0.7740

97.5% 0.9164 0.9687 0.8885 0.9090 0.9164 0.8334

Dt3

Tstart2\_test Tstart3\_test Tstart4\_test Tstart5\_test Tstart6\_test Tstart8\_test

2.5% 0.3785 0.6329 0.6806 0.7664 0.8055 0.7883

97.5% 0.8322 0.8943 0.9041 0.8977 0.8846 0.8356

Dt4

Tstart2\_test Tstart3\_test Tstart4\_test Tstart5\_test Tstart6\_test Tstart8\_test

2.5% 0.5068 0.6785 0.7243 0.7721 0.7948 0.7948

97.5% 0.8351 0.8465 0.8519 0.8874 0.8608 0.8468

Dt5

Tstart2\_test Tstart3\_test Tstart4\_test Tstart5\_test Tstart6\_test Tstart8\_test

2.5% 0.6530 0.7244 0.7370 0.7692 0.7956 0.8112

97.5% 0.8163 0.8103 0.8567 0.8621 0.8506 0.8926