I am dropping the column “P\_GEO” for simpler data. (So I don’t need to one-hot encoding it)

# Covid Anxiety

covid\_anxious:

ca\_weight\_sharing: True

top\_case\_enabled: False

training\_epochs: 1000

learning\_rate: 0.01

batch\_size: 16

top\_k: 5

class\_weight\_sharing: True

patience: 40

discount: 40

Average accuracy:0.292

KNN accuracy:0.279

LMNN/NCA accuracy:0.326

Trying alternative setting

covid\_anxious:

ca\_weight\_sharing: True

top\_case\_enabled: False

training\_epochs: 1500

learning\_rate: 0.0001

batch\_size: 32

top\_k: 5

class\_weight\_sharing: True

patience: 40

discount: 40

Average accuracy:0.252

KNN accuracy:0.272

LMNN/NCA accuracy:nan

Baseline NN classifier

Accuracy on the test set: 33.89%

Accuracy on the test set: 29.53%

Best acc achieved: 0.3691275167785235

# Covid Anxiety with additional information

covid\_anxious:

ca\_weight\_sharing: True

top\_case\_enabled: False

training\_epochs: 1000

learning\_rate: 0.01

batch\_size: 16

top\_k: 5

class\_weight\_sharing: True

patience: 40

discount: 40

patience exceeded, loading best model

Average accuracy:0.480

KNN accuracy:0.365

LMNN/NCA accuracy:0.385

Baseline NN classifier

Accuracy on the test set: 49.66%

Accuracy on the test set: 50.00%

Best acc achieved: 0.5

# 

# Covid Anxiety Regression

covid\_anxious\_reg:

ca\_weight\_sharing: True

top\_case\_enabled: False

training\_epochs: 1000

learning\_rate: 0.01

batch\_size: 16

top\_k: 5

class\_weight\_sharing: True

patience: 40

discount: 40

Average accuracy: 1.1564125

Average top\_k\_average\_accuracies 1.068419

KNN accuracy: 1.082696

After turning on top\_case\_enabled.

Average accuracy: 1.2487252

Average top\_k\_average\_accuracies 1.0123578

KNN accuracy: 1.1121247

After tuning parameters

covid\_anxious\_reg:

ca\_weight\_sharing: True

top\_case\_enabled: False

training\_epochs: 1000

learning\_rate: 0.0001

batch\_size: 32

top\_k: 5

class\_weight\_sharing: True

patience: 40

discount: 40

Average accuracy: 0.90239686

Average top\_k\_average\_accuracies 1.1699415

KNN accuracy: 1.1121247

Baseline NN

Best loss achieved: 0.8720429539680481

# Covid Anxiety Regression with Additional Info

covid\_anxious\_reg:

ca\_weight\_sharing: True

top\_case\_enabled: False

training\_epochs: 1000

learning\_rate: 0.01

batch\_size: 16

top\_k: 5

class\_weight\_sharing: True

patience: 40

discount: 40

Average accuracy: 0.8103964

Average top\_k\_average\_accuracies 0.71312934

KNN accuracy: 0.9167228

try alternative setting

covid\_anxious\_reg:

ca\_weight\_sharing: True

top\_case\_enabled: False

training\_epochs: 1000

learning\_rate: 0.0001

batch\_size: 32

top\_k: 5

class\_weight\_sharing: True

patience: 40

discount: 40

Average accuracy: 0.6188838

Average top\_k\_average\_accuracies 0.8510462

KNN accuracy: 0.91139966

Baseline NN

Average accuracy: 0.6219502031803131

# Covid Depression

covid\_depressed:

ca\_weight\_sharing: True

top\_case\_enabled: False

training\_epochs: 1000

learning\_rate: 0.01

batch\_size: 16

top\_k: 5

class\_weight\_sharing: True

patience: 40

discount: 40

Average accuracy:0.312

KNN accuracy:0.258

LMNN/NCA accuracy:0.312

By baseline NN classifier

Average accuracy: 0.3382165605095541

# Covid Depression with Additional Info

covid\_depressed:

ca\_weight\_sharing: True

top\_case\_enabled: False

training\_epochs: 1000

learning\_rate: 0.01

batch\_size: 16

top\_k: 5

class\_weight\_sharing: True

patience: 40

discount: 40

Average accuracy:0.280

KNN accuracy:0.328

LMNN/NCA accuracy:0.354

Average accuracy:0.273

KNN accuracy:0.341

LMNN/NCA accuracy:0.402

Reran again. I don’t believe this

Average accuracy:0.267

KNN accuracy:0.334

LMNN/NCA accuracy:0.347

Rerun with new setting

covid\_depressed:

ca\_weight\_sharing: True

top\_case\_enabled: False

training\_epochs: 1500

learning\_rate: 0.0001

batch\_size: 32

top\_k: 5

class\_weight\_sharing: True

patience: 40

discount: 40

Tried multiple settings, no good results. Class bias is changed, but other parameters remain. This makes the class prediction only one class…. Talking with Yu and Ziwei about this.

Average accuracy:0.507

KNN accuracy:0.343

LMNN/NCA accuracy:nan

By baseline NN

Best acc achieved: 0.5080385852090032

Average accuracy: 0.5080385852090032

# Covid Depression Regression

covid\_depressed\_reg:

ca\_weight\_sharing: True

top\_case\_enabled: False

training\_epochs: 1000

learning\_rate: 0.01

batch\_size: 16

top\_k: 5

class\_weight\_sharing: True

patience: 40

discount: 40

Average accuracy: 1.2330157

Average top\_k\_average\_accuracies 1.1759923

KNN accuracy: 1.1077282

Turning on top case enabled

Average accuracy: 1.2076086

Average top\_k\_average\_accuracies 0.9921559

KNN accuracy: 1.1077282

covid\_depressed\_reg:

ca\_weight\_sharing: True

top\_case\_enabled: False

training\_epochs: 1000

learning\_rate: 0.0001

batch\_size: 32

top\_k: 5

class\_weight\_sharing: True

patience: 40

discount: 40

Average accuracy: 0.89060336

Average top\_k\_average\_accuracies 1.1045561

KNN accuracy: 1.1090972

baseline NN

Average accuracy: 0.8323584198951721

# Covid Depression Regression with Additional Info

covid\_depressed\_reg:

ca\_weight\_sharing: True

top\_case\_enabled: False

training\_epochs: 1000

learning\_rate: 0.01

batch\_size: 16

top\_k: 5

class\_weight\_sharing: True

patience: 40

discount: 40

Average accuracy: 0.9121288

Average top\_k\_average\_accuracies 0.9167979

KNN accuracy: 0.9140206

covid\_depressed\_reg:

ca\_weight\_sharing: True

top\_case\_enabled: False

training\_epochs: 1000

learning\_rate: 0.0001

batch\_size: 32

top\_k: 5

class\_weight\_sharing: True

patience: 40

discount: 40

Average accuracy: 0.5590925

Average top\_k\_average\_accuracies 0.7498767

KNN accuracy: 0.8900901

Baseline NN

Average accuracy: 0.559569263458252

# Covid Lonely

covid\_lonely:

ca\_weight\_sharing: True

top\_case\_enabled: False

training\_epochs: 1000

learning\_rate: 0.01

batch\_size: 16

top\_k: 5

class\_weight\_sharing: True

patience: 40

discount: 40

Average accuracy:0.358

KNN accuracy:0.281

LMNN/NCA accuracy:0.309

NN Classifier

Average accuracy: 0.43298611111111107

# Covid Lonely with Additional Info

covid\_lonely:

ca\_weight\_sharing: True

top\_case\_enabled: False

training\_epochs: 1000

learning\_rate: 0.01

batch\_size: 16

top\_k: 5

class\_weight\_sharing: True

patience: 40

discount: 40

Average accuracy:0.503

KNN accuracy:0.347

LMNN/NCA accuracy:0.396

Baseline NN

Average accuracy: 0.5138888888888888

# Covid Lonely Regression

covid\_lonely\_reg:

ca\_weight\_sharing: True

top\_case\_enabled: False

training\_epochs: 1000

learning\_rate: 0.01

batch\_size: 16

top\_k: 5

class\_weight\_sharing: True

patience: 40

discount: 40

Average accuracy: 1.1907403

Average top\_k\_average\_accuracies 1.0088161

KNN accuracy: 1.0716833

covid\_lonely\_reg:

ca\_weight\_sharing: True

top\_case\_enabled: False

training\_epochs: 1000

learning\_rate: 0.0001

batch\_size: 32

top\_k: 5

class\_weight\_sharing: True

patience: 40

discount: 40

Average accuracy: 0.8479761

Average top\_k\_average\_accuracies 1.054989

KNN accuracy: 1.0713055

Baseline NN

Average accuracy: 0.8287375509738922

# Covid Lonely Regression with Additional Info

covid\_lonely\_reg:

ca\_weight\_sharing: True

top\_case\_enabled: False

training\_epochs: 1000

learning\_rate: 0.01

batch\_size: 16

top\_k: 5

class\_weight\_sharing: True

patience: 40

discount: 40

Average accuracy: 0.71954215

Average top\_k\_average\_accuracies 0.6222331

KNN accuracy: 0.85515153

covid\_lonely\_reg:

ca\_weight\_sharing: True

top\_case\_enabled: False

training\_epochs: 1000

learning\_rate: 0.0001

batch\_size: 32

top\_k: 5

class\_weight\_sharing: True

patience: 40

discount: 40

Average accuracy: 0.56742513

Average top\_k\_average\_accuracies 0.7529514

KNN accuracy: 0.88509285

Baseline NN

Average accuracy: 0.527

# Covid Physical

covid\_physical:

ca\_weight\_sharing: True

top\_case\_enabled: False

training\_epochs: 1000

learning\_rate: 0.01

batch\_size: 16

top\_k: 5

class\_weight\_sharing: True

patience: 40

discount: 40

Average accuracy:0.404

KNN accuracy:0.293

LMNN/NCA accuracy:0.326

By baseline NN

Average accuracy: 0.4565217391304347

# Covid Physical with Additional Info

covid\_physical:

ca\_weight\_sharing: True

top\_case\_enabled: False

training\_epochs: 1000

learning\_rate: 0.01

batch\_size: 16

top\_k: 5

class\_weight\_sharing: True

patience: 40

discount: 40

Average accuracy:0.304

KNN accuracy:0.217

LMNN/NCA accuracy:0.283

Baseline NN

Average accuracy: 0.3630434782608695

# Covid Physical Regression

covid\_physical\_reg:

ca\_weight\_sharing: True

top\_case\_enabled: False

training\_epochs: 1000

learning\_rate: 0.01

batch\_size: 16

top\_k: 5

class\_weight\_sharing: True

patience: 40

discount: 40

Average accuracy: 1.1271389

Average top\_k\_average\_accuracies 1.021635

KNN accuracy: 1.1058342

covid\_physical\_reg:

ca\_weight\_sharing: True

top\_case\_enabled: False

training\_epochs: 2000

learning\_rate: 0.0001

batch\_size: 32

top\_k: 5

class\_weight\_sharing: True

patience: 40

discount: 40

Average accuracy: 0.99592906

Average top\_k\_average\_accuracies 1.0465546

KNN accuracy: 1.0793874

Baseline NN

Average accuracy: 0.8827733814716339

# Covid Physical Regression with Additional Info

covid\_physical\_reg:

ca\_weight\_sharing: True

top\_case\_enabled: False

training\_epochs: 1000

learning\_rate: 0.01

batch\_size: 16

top\_k: 5

class\_weight\_sharing: True

patience: 40

discount: 40

Average accuracy: 0.83795214

Average top\_k\_average\_accuracies 0.81419927

KNN accuracy: 0.9663504

covid\_physical\_reg:

ca\_weight\_sharing: True

top\_case\_enabled: False

training\_epochs: 1000

learning\_rate: 0.0001

batch\_size: 32

top\_k: 5

class\_weight\_sharing: True

patience: 40

discount: 40

Average accuracy: 0.68093604

Average top\_k\_average\_accuracies 0.80702674

KNN accuracy: 0.96628094

Baseline NN

Average accuracy: 0.695