Finding average accuracy:

1. XGB with default parameters(max\_depth=3, learning\_rate=0.1, n\_estimators=100) (running 100 times per set)

set 1: 0.9313

1. XGB with max\_depth=2, learning\_rate=0.1, n\_estimators=200 (running 100 times per set)

set 1: 0.9302

1. XGB with max\_depth=2, learning\_rate=0.05, n\_estimators=200 (running 100 times per set)

set 1: 0.9321

1. XGB with max\_depth=3, learning\_rate=0.05, n\_estimators=200, min\_child\_weight=5 (running 100 times per set)

set 1: 0.9330

1. XGB with max\_depth=3, learning\_rate=0.1, n\_estimators=200, min\_child\_weight=5 (running 100 times per set)

set 1: 0.9274

1. XGB with max\_depth=3, learning\_rate=0.05, n\_estimators=200, min\_child\_weight=5, gamma=0.1 (running 100 times per set)

set 1: 0.9318

1. XGB with max\_depth=3, learning\_rate=0.05, n\_estimators=200, min\_child\_weight=5, gamma=0.2 (running 100 times per set)

set 1: 0.9301

1. XGB with max\_depth=3, learning\_rate=0.05, n\_estimators=200, min\_child\_weight=5, gamma=0.4 (running 100 times per set)

set 1: 0.9330

set 2: 0.9328

1. XGB with max\_depth=3, learning\_rate=0.05, n\_estimators=200, min\_child\_weight=5, gamma=0.4, colsample\_bytree=0.6, subsample=0.8 (running 100 times per set)

set 1: 0.9340

1. XGB with max\_depth=3, learning\_rate=0.05, n\_estimators=200, min\_child\_weight=5, gamma=0.4, colsample\_bytree=0.6, subsample=0.8, reg\_alpha=1.1 (running 100 times per set)

set 1: 0.9352

1. XGB with max\_depth=3, learning\_rate=0.02, n\_estimators=200, min\_child\_weight=5, gamma=0.4, colsample\_bytree=0.6, subsample=0.8, reg\_alpha=1.1 (running 100 times per set)

set 1: 0.9376

set 2: 0.9367

set 3: 0.9369

set 4: 0.9350

mongoDB set 1: 0.9385

(running 1000 times per set)

set 1: 0.9350

set 1: 0.9380 (best overall results)

1. XGB with max\_depth=3, learning\_rate=0.02, n\_estimators=200, min\_child\_weight=5, gamma=0.4, colsample\_bytree=0.6, subsample=0.8, reg\_alpha=1.1, reg\_lambda=9.2 (running 100 times per set)

set 1: 0.9359

1. XGB with max\_depth=3, learning\_rate=0.02, n\_estimators=200, min\_child\_weight=5, gamma=0.4, colsample\_bytree=0.6, colsample\_bynode=0.4, subsample=0.8, reg\_alpha=1.1, reg\_lambda=9.2 (running 100 times per set)

set 1: 0.9393 (max accuracy till now)

set 2: 0.9354

set 3: 0.9362

set 4: 0.9355

(running 1000 times per set)

set 1: 0.9341

1. XGB with max\_depth=3, learning\_rate=0.02, n\_estimators=200, min\_child\_weight=5, gamma=0.4, colsample\_bytree=0.6, colsample\_bynode=0.4, colsample\_bylevel=0.4, subsample=0.8, reg\_alpha=1.1, reg\_lambda=9.2 (running 100 times per set)

set 1: 0.9348

set 2: 0.9351

1. XGB with max\_depth=3, learning\_rate=0.02, n\_estimators=200, min\_child\_weight=5, gamma=0.4, colsample\_bytree=0.6, subsample=0.8, reg\_alpha=1.1, base\_score=0.3 (running 100 times per set)

set 1: 0.9364

1. XGB with max\_depth=3, learning\_rate=0.06, n\_estimators=100, min\_child\_weight=3, gamma=0, colsample\_bytree=0.6, subsample=0.8, reg\_alpha=1.5, base\_score=0.3 (running 100 times per set)

set 1: 0.9358

1. XGB with max\_depth=3, learning\_rate=0.06, n\_estimators=100, min\_child\_weight=3, gamma=0, colsample\_bytree=0.6, subsample=0.9, reg\_alpha=1.5, base\_score=0.3 (running 100 times per set)

set 1: 0.9338