

```

import numpy # linear algebra
import pandas as pd # data processing, CSV file I/O (e.g. pd.read_csv)
import io
# Models:
from sklearn import svm
from sklearn.model_selection import cross_validate
from sklearn.linear_model import LinearRegression
from sklearn.model_selection import KFold, cross_val_score
# Python utilities:
import time
import os
from sklearn.ensemble import GradientBoostingClassifier
from sklearn.metrics import roc_auc_score
from sklearn.metrics import roc_curve
import matplotlib.pyplot as plt
import datetime
%tensorflow_version 2.x
import tensorflow as tf

```

```

from google.colab import drive
drive.mount('/content/gdrive')

```

☞ Drive already mounted at /content/gdrive; to attempt to forcibly remount, call

```

train_data=pd.read_csv('gdrive/My Drive/GiveMeSomeCredit/cs-training.csv')
test_data=pd.read_csv('gdrive/My Drive/GiveMeSomeCredit/cs-test.csv')
cv = KFold(n_splits=2,random_state=None, shuffle=False)

```

```

not_missing = train_data.dropna()
target = 'MonthlyIncome'
predictors = [c for c in list(not_missing) if c not in [target, 'Unnamed: 0','Series']
X_data = not_missing[predictors]
y_data = not_missing[target]
regr = LinearRegression().fit(X_data, y_data)
regr.score(X_data, y_data)

```

☞ 0.02201505632577072

```

train_data=train_data.drop(['Unnamed: 0'], axis=1)

```

```

train_data=train_data.fillna(round(train_data.median()))

```

```

train_data.loc[train_data.DebtRatio > 1, 'DebtRatio'] = train_data['DebtRatio'].mean()

```

```

y=train_data['SeriousDlqin2yrs']
x=train_data.drop(['SeriousDlqin2yrs'], axis=1)

```

```

gbcores=[]
for n in [150, 160, 170, 180, 190, 200, 210, 220, 230, 240, 250, 260, 270, 280, 290]

```

```
gbscores.append(numpy.mean(cross_val_score(GradientBoostingClassifier(learning_
print(gbscores)
start_time = datetime.datetime.now()
print (numpy.mean(cross_val_score(GradientBoostingClassifier(learning_rate=0.1, n_
print ('Time elapsed:', datetime.datetime.now() - start_time)
```



Iter	Train Loss	Remaining Time
1	0.4575	18.33s
2	0.4392	18.75s
3	0.4256	18.56s
4	0.4154	18.39s
5	0.4074	18.20s
6	0.4009	18.21s
7	0.3954	18.02s
8	0.3904	17.91s
9	0.3863	17.71s
10	0.3828	17.67s
20	0.3648	16.30s
30	0.3581	15.03s
40	0.3547	13.75s
50	0.3522	12.46s
60	0.3504	11.18s
70	0.3489	9.91s
80	0.3478	8.65s
90	0.3467	7.40s
100	0.3459	6.16s
Iter	Train Loss	Remaining Time
1	0.4571	18.08s
2	0.4388	18.29s
3	0.4263	18.00s
4	0.4162	17.89s
5	0.4081	17.80s
6	0.4023	17.79s
7	0.3970	17.60s
8	0.3926	17.59s
9	0.3886	17.46s
10	0.3860	17.38s
20	0.3689	16.04s
30	0.3623	14.78s
40	0.3582	13.58s
50	0.3557	12.34s
60	0.3538	11.10s
70	0.3523	9.84s
80	0.3510	8.60s
90	0.3500	7.36s
100	0.3493	6.12s
Iter	Train Loss	Remaining Time
1	0.4575	19.15s
2	0.4392	19.36s
3	0.4256	19.13s
4	0.4154	19.06s
5	0.4074	18.95s
6	0.4009	18.95s
7	0.3954	18.77s
8	0.3904	18.74s
9	0.3863	18.59s
10	0.3828	18.55s
20	0.3648	17.23s
30	0.3581	16.00s
40	0.3547	14.81s
50	0.3522	13.55s
60	0.3504	12.28s
70	0.3489	11.04s
80	0.3478	9.80s
90	0.3467	8.57s
100	0.3459	7.34s
Iter	Train Loss	Remaining Time

1	0.4571	19.40s
2	0.4388	19.89s
3	0.4263	19.61s
4	0.4162	19.52s
5	0.4081	19.40s
6	0.4023	19.28s
7	0.3970	19.27s
8	0.3926	19.21s
9	0.3886	19.06s
10	0.3860	19.01s
20	0.3689	17.55s
30	0.3623	16.18s
40	0.3582	14.87s
50	0.3557	13.58s
60	0.3538	12.35s
70	0.3523	11.07s
80	0.3510	9.82s
90	0.3500	8.58s
100	0.3493	7.34s
Iter	Train Loss	Remaining Time
1	0.4575	20.44s
2	0.4392	20.83s
3	0.4256	20.57s
4	0.4154	20.52s
5	0.4074	20.38s
6	0.4009	20.29s
7	0.3954	20.19s
8	0.3904	20.08s
9	0.3863	19.98s
10	0.3828	19.89s
20	0.3648	18.43s
30	0.3581	17.19s
40	0.3547	15.95s
50	0.3522	14.70s
60	0.3504	13.45s
70	0.3489	12.20s
80	0.3478	10.98s
90	0.3467	9.75s
100	0.3459	8.52s
Iter	Train Loss	Remaining Time
1	0.4571	20.30s
2	0.4388	21.11s
3	0.4263	20.92s
4	0.4162	20.70s
5	0.4081	20.57s
6	0.4023	20.59s
7	0.3970	20.36s
8	0.3926	20.25s
9	0.3886	20.09s
10	0.3860	20.04s
20	0.3689	18.51s
30	0.3623	17.17s
40	0.3582	15.90s
50	0.3557	14.66s
60	0.3538	13.47s
70	0.3523	12.23s
80	0.3510	10.99s
90	0.3500	9.76s
100	0.3493	8.54s
Iter	Train Loss	Remaining Time
1	0.4575	21.57s
2	0.4392	21.62s

3	0.4256	21.44s
4	0.4154	21.37s
5	0.4074	21.33s
6	0.4009	21.46s
7	0.3954	21.43s
8	0.3904	21.33s
9	0.3863	21.13s
10	0.3828	20.99s
20	0.3648	19.59s
30	0.3581	18.29s
40	0.3547	17.10s
50	0.3522	15.87s
60	0.3504	14.67s
70	0.3489	13.44s
80	0.3478	12.22s
90	0.3467	11.00s
100	0.3459	9.77s
Iter	Train Loss	Remaining Time
1	0.4571	21.31s
2	0.4388	21.56s
3	0.4263	21.35s
4	0.4162	21.20s
5	0.4081	21.12s
6	0.4023	21.30s
7	0.3970	21.24s
8	0.3926	21.13s
9	0.3886	21.07s
10	0.3860	20.93s
20	0.3689	19.60s
30	0.3623	18.32s
40	0.3582	17.06s
50	0.3557	15.90s
60	0.3538	14.66s
70	0.3523	13.45s
80	0.3510	12.22s
90	0.3500	11.00s
100	0.3493	9.77s
Iter	Train Loss	Remaining Time
1	0.4575	23.68s
2	0.4392	23.46s
3	0.4256	23.10s
4	0.4154	22.92s
5	0.4074	22.72s
6	0.4009	22.63s
7	0.3954	22.44s
8	0.3904	22.33s
9	0.3863	22.32s
10	0.3828	22.22s
20	0.3648	20.87s
30	0.3581	19.62s
40	0.3547	18.43s
50	0.3522	17.20s
60	0.3504	15.93s
70	0.3489	14.68s
80	0.3478	13.43s
90	0.3467	12.21s
100	0.3459	10.98s
Iter	Train Loss	Remaining Time
1	0.4571	24.04s
2	0.4388	23.71s
3	0.4263	23.19s
4	0.4162	22.11s

4	0.4102	23.11s
5	0.4081	22.96s
6	0.4023	22.78s
7	0.3970	22.58s
8	0.3926	22.60s
9	0.3886	22.58s
10	0.3860	22.45s
20	0.3689	21.03s
30	0.3623	19.68s
40	0.3582	18.42s
50	0.3557	17.16s
60	0.3538	15.92s
70	0.3523	14.67s
80	0.3510	13.43s
90	0.3500	12.19s
100	0.3493	10.97s
Iter	Train Loss	Remaining Time
1	0.4575	24.94s
2	0.4392	24.76s
3	0.4256	24.38s
4	0.4154	24.35s
5	0.4074	24.18s
6	0.4009	24.22s
7	0.3954	24.02s
8	0.3904	23.84s
9	0.3863	23.71s
10	0.3828	23.61s
20	0.3648	22.08s
30	0.3581	20.78s
40	0.3547	19.52s
50	0.3522	18.28s
60	0.3504	17.06s
70	0.3489	15.84s
80	0.3478	14.63s
90	0.3467	13.41s
100	0.3459	12.18s
200	0.3395	0.00s
Iter	Train Loss	Remaining Time
1	0.4571	23.84s
2	0.4388	24.47s
3	0.4263	24.07s
4	0.4162	23.92s
5	0.4081	23.74s
6	0.4023	23.75s
7	0.3970	23.57s
8	0.3926	23.64s
9	0.3886	23.49s
10	0.3860	23.35s
20	0.3689	22.10s
30	0.3623	20.84s
40	0.3582	19.60s
50	0.3557	18.41s
60	0.3538	17.17s
70	0.3523	15.93s
80	0.3510	14.68s
90	0.3500	13.47s
100	0.3493	12.24s
200	0.3430	0.00s
Iter	Train Loss	Remaining Time
1	0.4575	25.60s
2	0.4392	26.05s
3	0.4256	25.66s

4	0.4154	25.64s
5	0.4074	25.50s
6	0.4009	25.59s
7	0.3954	25.35s
8	0.3904	25.27s
9	0.3863	25.10s
10	0.3828	24.99s
20	0.3648	23.53s
30	0.3581	22.28s
40	0.3547	21.03s
50	0.3522	19.75s
60	0.3504	18.43s
70	0.3489	17.19s
80	0.3478	15.94s
90	0.3467	14.69s
100	0.3459	13.44s
200	0.3395	1.22s
Iter	Train Loss	Remaining Time
1	0.4571	24.88s
2	0.4388	26.25s
3	0.4263	25.80s
4	0.4162	25.55s
5	0.4081	25.39s
6	0.4023	25.26s
7	0.3970	25.03s
8	0.3926	24.87s
9	0.3886	24.69s
10	0.3860	24.56s
20	0.3689	23.17s
30	0.3623	22.03s
40	0.3582	20.79s
50	0.3557	19.55s
60	0.3538	18.35s
70	0.3523	17.14s
80	0.3510	15.93s
90	0.3500	14.72s
100	0.3493	13.51s
200	0.3430	1.22s
Iter	Train Loss	Remaining Time
1	0.4575	26.60s
2	0.4392	26.69s
3	0.4256	26.38s
4	0.4154	26.26s
5	0.4074	26.16s
6	0.4009	26.15s
7	0.3954	26.15s
8	0.3904	26.10s
9	0.3863	25.92s
10	0.3828	25.91s
20	0.3648	24.55s
30	0.3581	23.31s
40	0.3547	22.09s
50	0.3522	20.85s
60	0.3504	19.60s
70	0.3489	18.36s
80	0.3478	17.12s
90	0.3467	15.88s
100	0.3459	14.64s
200	0.3395	2.43s
Iter	Train Loss	Remaining Time
1	0.4571	27.00s
2	0.4388	26.96s

3	0.4263	26.48s
4	0.4162	26.22s
5	0.4081	26.14s
6	0.4023	25.98s
7	0.3970	25.81s
8	0.3926	25.80s
9	0.3886	25.70s
10	0.3860	25.66s
20	0.3689	24.44s
30	0.3623	23.15s
40	0.3582	21.94s
50	0.3557	20.72s
60	0.3538	19.52s
70	0.3523	18.31s
80	0.3510	17.08s
90	0.3500	15.87s
100	0.3493	14.65s
200	0.3430	2.43s
Iter	Train Loss	Remaining Time
1	0.4575	27.88s
2	0.4392	28.40s
3	0.4256	28.05s
4	0.4154	28.26s
5	0.4074	28.09s
6	0.4009	28.07s
7	0.3954	27.85s
8	0.3904	27.80s
9	0.3863	27.61s
10	0.3828	27.49s
20	0.3648	26.54s
30	0.3581	25.10s
40	0.3547	23.74s
50	0.3522	22.40s
60	0.3504	21.11s
70	0.3489	19.80s
80	0.3478	18.51s
90	0.3467	17.24s
100	0.3459	15.97s
200	0.3395	3.66s
Iter	Train Loss	Remaining Time
1	0.4571	27.35s
2	0.4388	27.82s
3	0.4263	27.45s
4	0.4162	27.34s
5	0.4081	27.30s
6	0.4023	27.49s
7	0.3970	27.24s
8	0.3926	27.15s
9	0.3886	26.99s
10	0.3860	26.92s
20	0.3689	25.49s
30	0.3623	24.25s
40	0.3582	23.05s
50	0.3557	21.85s
60	0.3538	20.65s
70	0.3523	19.44s
80	0.3510	18.25s
90	0.3500	17.05s
100	0.3493	15.82s
200	0.3430	3.64s
Iter	Train Loss	Remaining Time
1	0.4575	28.25s

1	0.4575	29.25s
2	0.4392	29.53s
3	0.4256	29.22s
4	0.4154	29.09s
5	0.4074	29.05s
6	0.4009	29.08s
7	0.3954	28.94s
8	0.3904	29.03s
9	0.3863	28.84s
10	0.3828	28.80s
20	0.3648	27.34s
30	0.3581	25.95s
40	0.3547	24.67s
50	0.3522	23.42s
60	0.3504	22.12s
70	0.3489	20.85s
80	0.3478	19.60s
90	0.3467	18.35s
100	0.3459	17.12s
200	0.3395	4.88s
Iter	Train Loss	Remaining Time
1	0.4571	28.69s
2	0.4388	29.01s
3	0.4263	28.70s
4	0.4162	28.58s
5	0.4081	28.61s
6	0.4023	28.65s
7	0.3970	28.62s
8	0.3926	28.51s
9	0.3886	28.36s
10	0.3860	28.21s
20	0.3689	26.82s
30	0.3623	25.56s
40	0.3582	24.36s
50	0.3557	23.18s
60	0.3538	21.97s
70	0.3523	20.75s
80	0.3510	19.51s
90	0.3500	18.29s
100	0.3493	17.07s
200	0.3430	4.86s
Iter	Train Loss	Remaining Time
1	0.4575	30.25s
2	0.4392	30.23s
3	0.4256	29.99s
4	0.4154	29.93s
5	0.4074	29.81s
6	0.4009	29.91s
7	0.3954	29.70s
8	0.3904	29.74s
9	0.3863	29.54s
10	0.3828	29.43s
20	0.3648	28.04s
30	0.3581	26.82s
40	0.3547	25.65s
50	0.3522	24.41s
60	0.3504	23.14s
70	0.3489	21.94s
80	0.3478	20.73s
90	0.3467	19.51s
100	0.3459	18.29s
200	0.3395	6.07s

Iter	Train Loss	Remaining Time
1	0.4571	30.59s
2	0.4388	30.61s
3	0.4263	30.14s
4	0.4162	29.93s
5	0.4081	29.98s
6	0.4023	30.09s
7	0.3970	29.85s
8	0.3926	29.83s
9	0.3886	29.72s
10	0.3860	29.70s
20	0.3689	28.23s
30	0.3623	26.96s
40	0.3582	25.74s
50	0.3557	24.52s
60	0.3538	23.24s
70	0.3523	21.99s
80	0.3510	20.74s
90	0.3500	19.50s
100	0.3493	18.27s
200	0.3430	6.07s

Iter	Train Loss	Remaining Time
1	0.4575	31.33s
2	0.4392	31.42s
3	0.4256	31.15s
4	0.4154	31.22s
5	0.4074	31.39s
6	0.4009	31.42s
7	0.3954	31.26s
8	0.3904	31.20s
9	0.3863	31.04s
10	0.3828	31.05s
20	0.3648	29.67s
30	0.3581	28.48s
40	0.3547	27.17s
50	0.3522	25.88s
60	0.3504	24.62s
70	0.3489	23.37s
80	0.3478	22.12s
90	0.3467	20.86s
100	0.3459	19.61s
200	0.3395	7.31s

Iter	Train Loss	Remaining Time
1	0.4571	31.93s
2	0.4388	31.65s
3	0.4263	31.27s
4	0.4162	31.25s
5	0.4081	31.12s
6	0.4023	30.99s
7	0.3970	30.93s
8	0.3926	30.89s
9	0.3886	30.86s
10	0.3860	30.70s
20	0.3689	29.31s
30	0.3623	28.04s
40	0.3582	26.76s
50	0.3557	25.56s
60	0.3538	24.37s
70	0.3523	23.15s
80	0.3510	21.93s
90	0.3500	20.71s
100	0.3493	19.48s

200	0.3430	7.28s
Iter	Train Loss	Remaining Time
1	0.4575	32.67s
2	0.4392	32.91s
3	0.4256	32.60s
4	0.4154	32.61s
5	0.4074	32.99s
6	0.4009	33.35s
7	0.3954	33.01s
8	0.3904	32.92s
9	0.3863	32.67s
10	0.3828	32.54s
20	0.3648	30.90s
30	0.3581	29.54s
40	0.3547	28.25s
50	0.3522	26.96s
60	0.3504	25.67s
70	0.3489	24.42s
80	0.3478	23.21s
90	0.3467	21.98s
100	0.3459	20.74s
200	0.3395	8.53s
Iter	Train Loss	Remaining Time
1	0.4571	33.41s
2	0.4388	33.22s
3	0.4263	32.67s
4	0.4162	32.86s
5	0.4081	32.86s
6	0.4023	32.76s
7	0.3970	32.47s
8	0.3926	32.37s
9	0.3886	32.33s
10	0.3860	32.27s
20	0.3689	30.76s
30	0.3623	29.43s
40	0.3582	28.14s
50	0.3557	26.88s
60	0.3538	25.64s
70	0.3523	24.35s
80	0.3510	23.11s
90	0.3500	21.90s
100	0.3493	20.67s
200	0.3430	8.48s
Iter	Train Loss	Remaining Time
1	0.4575	33.94s
2	0.4392	34.21s
3	0.4256	33.84s
4	0.4154	33.66s
5	0.4074	33.78s
6	0.4009	33.66s
7	0.3954	33.41s
8	0.3904	33.33s
9	0.3863	33.15s
10	0.3828	33.06s
20	0.3648	31.98s
30	0.3581	30.85s
40	0.3547	29.64s
50	0.3522	28.42s
60	0.3504	27.14s
70	0.3489	25.88s
80	0.3478	24.65s
90	0.3467	23.42s
100	0.3459	22.19s
200	0.3395	8.53s

90	0.3461	23.38s
100	0.3459	22.12s
200	0.3395	9.80s
Iter	Train Loss	Remaining Time
1	0.4571	33.56s
2	0.4388	33.86s
3	0.4263	33.68s
4	0.4162	33.65s
5	0.4081	33.98s
6	0.4023	33.98s
7	0.3970	33.69s
8	0.3926	33.69s
9	0.3886	33.51s
10	0.3860	33.34s
20	0.3689	31.92s
30	0.3623	30.82s
40	0.3582	29.48s
50	0.3557	28.18s
60	0.3538	26.91s
70	0.3523	25.66s
80	0.3510	24.41s
90	0.3500	23.17s
100	0.3493	21.92s
200	0.3430	9.71s
Iter	Train Loss	Remaining Time
1	0.4575	35.09s
2	0.4392	35.38s
3	0.4256	34.97s
4	0.4154	34.80s
5	0.4074	34.64s
6	0.4009	34.53s
7	0.3954	34.42s
8	0.3904	34.52s
9	0.3863	34.50s
10	0.3828	34.38s
20	0.3648	33.02s
30	0.3581	31.76s
40	0.3547	30.53s
50	0.3522	29.31s
60	0.3504	28.03s
70	0.3489	26.80s
80	0.3478	25.56s
90	0.3467	24.38s
100	0.3459	23.16s
200	0.3395	10.89s
Iter	Train Loss	Remaining Time
1	0.4571	35.99s
2	0.4388	35.48s
3	0.4263	34.99s
4	0.4162	34.68s
5	0.4081	34.61s
6	0.4023	34.50s
7	0.3970	34.58s
8	0.3926	34.53s
9	0.3886	34.45s
10	0.3860	34.52s
20	0.3689	32.88s
30	0.3623	31.59s
40	0.3582	30.41s
50	0.3557	29.17s
60	0.3538	27.96s
70	0.3523	26.76s

80	0.3510	25.56s
90	0.3500	24.34s
100	0.3493	23.14s
200	0.3430	10.88s
Iter	Train Loss	Remaining Time
1	0.4575	36.20s
2	0.4392	36.55s
3	0.4256	36.59s
4	0.4154	36.86s
5	0.4074	36.63s
6	0.4009	36.65s
7	0.3954	36.42s
8	0.3904	36.34s
9	0.3863	36.12s
10	0.3828	36.04s
20	0.3648	34.61s
30	0.3581	33.27s
40	0.3547	31.96s
50	0.3522	30.67s
60	0.3504	29.35s
70	0.3489	28.13s
80	0.3478	26.93s
90	0.3467	25.71s
100	0.3459	24.48s
200	0.3395	12.18s
300	0.3343	0.00s

Iter	Train Loss	Remaining Time
1	0.4571	35.89s
2	0.4388	36.49s
3	0.4263	36.02s
4	0.4162	35.83s
5	0.4081	35.90s
6	0.4023	35.83s
7	0.3970	35.68s
8	0.3926	35.77s
9	0.3886	35.67s
10	0.3860	35.61s
20	0.3689	34.22s
30	0.3623	32.96s
40	0.3582	31.78s
50	0.3557	30.60s
60	0.3538	29.39s
70	0.3523	28.14s
80	0.3510	26.90s
90	0.3500	25.67s
100	0.3493	24.44s
200	0.3430	12.14s
300	0.3386	0.00s

[0.8629930371809107, 0.8629747069036959, 0.8629698747816916, 0.863004799097170

Iter	Train Loss	Remaining Time
1	0.4575	36.00s
2	0.4392	37.06s
3	0.4256	36.45s
4	0.4154	36.20s
5	0.4074	36.00s
6	0.4009	36.05s
7	0.3954	36.04s
8	0.3904	35.99s
9	0.3863	35.79s
10	0.3828	35.73s
20	0.3648	34.26s
30	0.3581	33.06s

40	0.3547	31.87s
50	0.3522	30.63s
60	0.3504	29.38s
70	0.3489	28.16s
80	0.3478	26.94s
90	0.3467	25.71s
100	0.3459	24.48s
200	0.3395	12.21s
300	0.3343	0.00s

Iter	Train Loss	Remaining Time
1	0.4571	36.42s
2	0.4388	36.84s
3	0.4263	36.44s
4	0.4162	36.71s
5	0.4081	36.52s
6	0.4023	36.47s
7	0.3970	36.26s
8	0.3926	36.20s
9	0.3886	36.06s
10	0.3860	35.95s
20	0.3689	34.58s
30	0.3623	33.38s
40	0.3582	32.09s
50	0.3557	30.90s
60	0.3538	29.65s
70	0.3523	28.45s
80	0.3510	27.15s
90	0.3500	25.89s
100	0.3493	24.67s
200	0.3430	12.23s
300	0.3386	0.00s

0.8629505839786042
Time elapsed: 0:01:13.805763

```
plt.figure(figsize=(10, 10))
models=[]
models.append(GradientBoostingClassifier(learning_rate=0.1, n_estimators=300, verbose=1))
for model in models:
    model.fit(x,y)
    testscore=model.predict_proba(x)[:,-1]
    fpr, tpr, thresholds = roc_curve(y, testscore)
    roc_auc = roc_auc_score(y, testscore)
    md = str(model)
    md = md[:md.find('(')]
    plt.plot(fpr, tpr, label='ROC fold %s (auc = %0.2f)' % (md, roc_auc))

plt.plot([0, 1], [0, 1], '--', color=(0.6, 0.6, 0.6))
plt.xlim([0, 1])
plt.ylim([0, 1])
plt.xlabel('False Positive Rate')
plt.ylabel('True Positive Rate')
plt.title('Receiver operating characteristic example')
plt.legend(loc="center")
plt.show()
```



Iter	Train Loss	Remaining Time
1	0.4578	1.35m
2	0.4391	1.35m
3	0.4260	1.33m
4	0.4164	1.32m
5	0.4082	1.31m
6	0.4024	1.31m
7	0.3966	1.30m
8	0.3922	1.30m
9	0.3881	1.29m
10	0.3854	1.29m
20	0.3680	1.24m
30	0.3616	1.20m
40	0.3584	1.15m
50	0.3562	1.10m
60	0.3546	1.05m
70	0.3536	1.01m
80	0.3528	57.82s
90	0.3521	55.20s
100	0.3516	52.56s
200	0.3474	26.15s
300	0.3445	0.00s



