C:\Users\whitn\Anaconda2\envs\ml4qs2\python.exe C:/Users/whitn/OneDrive/Documenten/Groupwork\_TommyErik/ML4QS/ML4QS-master/PythonCode/crowdsignals\_ch7\_classification\_gym\_BLOCKPREDICTION.py

C:/Users/whitn/OneDrive/Documenten/Groupwork\_TommyErik/ML4QS/ML4QS-master/PythonCode/crowdsignals\_ch7\_classification\_gym\_BLOCKPREDICTION.py:45: FutureWarning: to\_datetime is deprecated. Use pd.to\_datetime(...)

dataset.index = dataset.index.to\_datetime()

acc\_phone\_x acc\_phone\_y acc\_phone\_z gyr\_phone\_x \

1970-01-01 00:58:00.300 -6.628655 -7.189602 0.311368 -0.032469

1970-01-01 00:58:03.000 -6.286026 -6.118780 -1.035611 0.366875

1970-01-01 00:58:05.700 -19.144041 -1.356276 -1.797710 1.261544

1970-01-01 00:58:08.400 0.735806 -2.257973 4.606496 -0.404825

1970-01-01 00:58:11.100 -27.118993 -0.207057 -8.613986 3.496303

1970-01-01 00:58:13.800 -16.296916 -21.023807 1.667518 -0.272674

1970-01-01 00:58:16.500 -4.718596 -9.220843 1.141510 -0.631214

1970-01-01 00:58:19.200 0.241478 -4.503509 2.229596 -0.905776

1970-01-01 00:58:21.900 -3.283587 -3.174420 1.276897 -0.425022

1970-01-01 00:58:24.600 -10.134675 -6.797017 2.616892 -0.450475

1970-01-01 00:58:27.300 -13.044963 -8.127598 -1.649716 -1.316768

1970-01-01 00:58:30.000 -13.421043 -3.154897 3.842876 -2.035106

1970-01-01 00:58:32.700 -7.735389 -7.036752 0.985800 -3.785572

1970-01-01 00:58:35.400 -11.695516 -7.857763 11.125632 -2.931954

1970-01-01 00:58:38.100 -6.826774 -7.028691 1.146908 -2.832681

1970-01-01 00:58:40.800 -6.778544 -3.625610 0.882991 -1.120140

1970-01-01 00:58:43.500 -5.210766 -2.284125 0.152317 -0.909242

1970-01-01 00:58:46.200 0.595345 -4.083212 2.484742 -0.330318

1970-01-01 00:58:48.900 -5.714078 -16.463789 -15.493635 -0.746294

1970-01-01 00:58:51.600 -17.324965 -0.353287 -0.142156 -0.331928

1970-01-01 00:58:54.300 -8.636716 -7.018260 2.146012 -0.510766

1970-01-01 00:58:57.000 -15.671904 -9.268012 4.414331 -0.184990

1970-01-01 00:58:59.700 -17.399305 -12.487947 5.752374 -1.365377

1970-01-01 00:59:02.400 -10.412127 -15.293356 -3.810186 1.566337

1970-01-01 00:59:05.100 -6.590566 -9.460028 -4.653467 0.907253

1970-01-01 00:59:07.800 -5.589545 -4.906330 1.059052 -0.680006

1970-01-01 00:59:10.500 -7.703059 -3.463998 1.186879 -0.768741

1970-01-01 00:59:13.200 -14.043170 -5.522305 4.163385 -0.840413

1970-01-01 00:59:15.900 -10.531097 -3.056082 1.624538 -0.242194

1970-01-01 00:59:18.600 -2.796597 -7.741109 1.462614 -2.186870

... ... ... ... ...

1970-01-01 01:01:09.300 -9.738584 -14.008952 6.136625 -5.917874

1970-01-01 01:01:12.000 -6.947663 -0.549649 -0.927288 1.726097

1970-01-01 01:01:14.700 -3.242272 6.888779 -0.143349 1.365435

1970-01-01 01:01:17.400 -8.755235 5.265433 5.020061 0.764464

1970-01-01 01:01:20.100 -9.025683 -4.332788 0.855795 -1.438917

1970-01-01 01:01:22.800 -1.664485 -5.347406 0.899261 -1.948334

1970-01-01 01:01:25.500 2.295373 -1.200930 3.936488 -1.946727

1970-01-01 01:01:28.200 -1.202976 -4.476065 -0.346618 -0.119083

1970-01-01 01:01:30.900 -17.681597 -4.926876 -0.334670 0.625295

1970-01-01 01:01:33.600 -7.085509 -12.036637 0.330699 1.139972

1970-01-01 01:01:36.300 1.232261 -13.588855 3.669092 0.964302

1970-01-01 01:01:39.000 1.531324 -3.069411 -0.296427 -2.240821

1970-01-01 01:01:41.700 3.537625 2.662674 -7.222187 0.609203

1970-01-01 01:01:44.400 2.103139 -5.116893 3.608989 3.383235

1970-01-01 01:01:47.100 -9.713181 -9.421836 -0.174215 -0.277113

1970-01-01 01:01:49.800 -18.536895 -16.693815 7.919976 2.576750

1970-01-01 01:01:52.500 -4.643479 -15.377443 2.595506 -1.417440

1970-01-01 01:01:55.200 0.916456 -13.861517 7.813907 -1.912592

1970-01-01 01:01:57.900 0.659272 -6.223208 -9.352672 -4.243599

1970-01-01 01:02:00.600 -7.238976 -4.318851 -4.400255 3.178585

1970-01-01 01:02:03.300 -6.113934 -8.648346 9.522835 -0.184511

1970-01-01 01:02:06.000 -15.178556 -17.538726 11.338141 0.813699

1970-01-01 01:02:08.700 -7.369030 -18.188143 19.794253 -2.037055

1970-01-01 01:02:11.400 -13.268693 -19.205445 24.424367 -3.042713

1970-01-01 01:02:14.100 -13.956622 -24.331779 5.539891 -2.256940

1970-01-01 01:02:16.800 -3.507197 -15.610332 2.695376 -3.997224

1970-01-01 01:02:19.500 -2.199571 -11.920040 3.267907 0.270018

1970-01-01 01:02:22.200 2.287597 -10.929157 2.270513 0.752891

1970-01-01 01:02:24.900 0.688239 -7.729107 0.592752 1.720652

1970-01-01 01:02:27.600 -11.261086 -16.483290 3.581879 1.615411

gyr\_phone\_y gyr\_phone\_z mag\_phone\_x mag\_phone\_y \

1970-01-01 00:58:00.300 0.151185 0.050098 1.492738 56.290318

1970-01-01 00:58:03.000 -0.336224 -0.041893 6.336843 51.881790

1970-01-01 00:58:05.700 -2.482850 -0.058015 1.109192 59.051654

1970-01-01 00:58:08.400 -0.444686 -0.728670 14.219837 46.082543

1970-01-01 00:58:11.100 -0.954962 -3.403056 0.920987 52.427115

1970-01-01 00:58:13.800 -1.438223 0.508495 7.430330 50.234337

1970-01-01 00:58:16.500 -0.528060 0.538985 12.292500 46.009220

1970-01-01 00:58:19.200 -1.909429 1.188027 9.706096 45.393611

1970-01-01 00:58:21.900 -4.160073 3.285268 11.135327 43.139229

1970-01-01 00:58:24.600 -2.642124 3.419919 14.221602 40.799001

1970-01-01 00:58:27.300 -2.244868 1.680262 10.677957 45.682667

1970-01-01 00:58:30.000 -1.943835 1.300959 12.185761 44.110518

1970-01-01 00:58:32.700 0.199373 1.174236 11.631256 47.332375

1970-01-01 00:58:35.400 -0.149167 1.328324 13.316568 48.436508

1970-01-01 00:58:38.100 0.617129 0.319915 13.053616 48.933106

1970-01-01 00:58:40.800 -5.877945 -0.144518 13.107235 51.714015

1970-01-01 00:58:43.500 -7.933010 0.039593 9.284883 54.173401

1970-01-01 00:58:46.200 -3.214065 -0.034137 8.883329 55.800594

1970-01-01 00:58:48.900 -3.331248 -0.247967 9.435307 50.877612

1970-01-01 00:58:51.600 -1.299724 -1.093349 12.428330 45.318485

1970-01-01 00:58:54.300 -0.571318 -1.779440 13.489813 43.604331

1970-01-01 00:58:57.000 -0.050220 -0.751373 15.270036 41.228794

1970-01-01 00:58:59.700 -3.375848 2.780206 9.585808 43.979094

1970-01-01 00:59:02.400 0.188880 1.087429 9.211609 45.617017

1970-01-01 00:59:05.100 -0.813144 -0.104591 12.378987 42.415399

1970-01-01 00:59:07.800 1.377628 0.939188 11.507478 45.095501

1970-01-01 00:59:10.500 0.443731 1.477052 14.183872 45.147364

1970-01-01 00:59:13.200 4.803142 1.844160 13.941144 49.524291

1970-01-01 00:59:15.900 2.865110 1.920094 12.870404 49.163237

1970-01-01 00:59:18.600 0.532150 1.198997 10.805857 50.203882

... ... ... ... ...

1970-01-01 01:01:09.300 0.574301 2.463119 0.084377 55.264753

1970-01-01 01:01:12.000 -2.172103 -0.138479 -9.151081 54.158038

1970-01-01 01:01:14.700 4.178579 -0.513194 4.081822 45.544562

1970-01-01 01:01:17.400 -0.335914 1.027055 21.226740 34.668051

1970-01-01 01:01:20.100 -1.101691 3.700256 19.332558 37.520968

1970-01-01 01:01:22.800 1.944126 6.196136 10.387581 45.871096

1970-01-01 01:01:25.500 -0.587450 0.288785 4.067098 50.679469

1970-01-01 01:01:28.200 -3.873436 -3.055432 -11.095853 51.161994

1970-01-01 01:01:30.900 2.953081 -5.219646 9.043899 47.670491

1970-01-01 01:01:33.600 -1.207210 -2.457771 15.448358 37.667676

1970-01-01 01:01:36.300 -1.479351 -0.576179 17.743441 35.448178

1970-01-01 01:01:39.000 0.458430 2.769793 9.551465 45.794595

1970-01-01 01:01:41.700 5.115032 -1.359012 -9.199119 54.863748

1970-01-01 01:01:44.400 -3.444505 -0.920504 -17.693964 53.348442

1970-01-01 01:01:47.100 4.562968 -4.042034 -5.517447 51.850301

1970-01-01 01:01:49.800 5.561780 -3.321814 7.320217 46.599957

1970-01-01 01:01:52.500 -1.731047 0.572213 10.059336 46.582848

1970-01-01 01:01:55.200 -2.277761 -0.917876 -7.183958 55.964195

1970-01-01 01:01:57.900 0.485460 0.760770 -7.920085 56.886198

1970-01-01 01:02:00.600 -0.746728 0.818710 -8.313549 53.660807

1970-01-01 01:02:03.300 1.186021 -1.219023 -7.212833 53.511935

1970-01-01 01:02:06.000 -1.612586 -0.542130 9.163348 42.504431

1970-01-01 01:02:08.700 -1.724646 4.755154 11.260850 44.376293

1970-01-01 01:02:11.400 4.610347 3.801887 8.637221 48.186493

1970-01-01 01:02:14.100 -2.548476 1.583523 4.480961 52.219341

1970-01-01 01:02:16.800 -0.085718 1.001373 -0.609093 52.346458

1970-01-01 01:02:19.500 3.281231 -1.963367 -3.789572 50.671596

1970-01-01 01:02:22.200 2.447317 -4.375093 1.441775 50.492230

1970-01-01 01:02:24.900 2.985699 -3.621599 7.771282 45.818795

1970-01-01 01:02:27.600 -0.503324 -2.163426 11.537792 42.965680

mag\_phone\_z pca\_1 ... \

1970-01-01 00:58:00.300 28.790892 0.045300 ...

1970-01-01 00:58:03.000 29.038664 -0.008927 ...

1970-01-01 00:58:05.700 16.759593 -0.030955 ...

1970-01-01 00:58:08.400 32.756748 -0.058516 ...

1970-01-01 00:58:11.100 35.343841 -0.116455 ...

1970-01-01 00:58:13.800 31.855463 -0.032889 ...

1970-01-01 00:58:16.500 38.022109 -0.058953 ...

1970-01-01 00:58:19.200 42.628715 -0.027155 ...

1970-01-01 00:58:21.900 38.348077 -0.067586 ...

1970-01-01 00:58:24.600 34.438662 -0.124383 ...

1970-01-01 00:58:27.300 38.607260 -0.101994 ...

1970-01-01 00:58:30.000 38.217962 -0.132474 ...

1970-01-01 00:58:32.700 32.259516 -0.070977 ...

1970-01-01 00:58:35.400 35.266060 -0.097825 ...

1970-01-01 00:58:38.100 25.228796 -0.068185 ...

1970-01-01 00:58:40.800 16.875602 -0.066115 ...

1970-01-01 00:58:43.500 18.327812 -0.024523 ...

1970-01-01 00:58:46.200 21.475227 0.022407 ...

1970-01-01 00:58:48.900 25.287827 -0.008138 ...

1970-01-01 00:58:51.600 30.806365 -0.161525 ...

1970-01-01 00:58:54.300 35.503276 -0.102659 ...

1970-01-01 00:58:57.000 36.623752 -0.157279 ...

1970-01-01 00:58:59.700 43.101836 -0.106264 ...

1970-01-01 00:59:02.400 37.370404 -0.051632 ...

1970-01-01 00:59:05.100 36.026358 -0.081878 ...

1970-01-01 00:59:07.800 33.275651 -0.070585 ...

1970-01-01 00:59:10.500 33.991860 -0.110747 ...

1970-01-01 00:59:13.200 27.997445 -0.122597 ...

1970-01-01 00:59:15.900 26.765438 -0.102528 ...

1970-01-01 00:59:18.600 25.502547 -0.019824 ...

... ... ... ...

1970-01-01 01:01:09.300 14.832494 0.073851 ...

1970-01-01 01:01:12.000 32.377623 0.102340 ...

1970-01-01 01:01:14.700 41.905401 -0.039515 ...

1970-01-01 01:01:17.400 43.567123 -0.234891 ...

1970-01-01 01:01:20.100 47.465236 -0.188274 ...

1970-01-01 01:01:22.800 39.896514 -0.039916 ...

1970-01-01 01:01:25.500 30.505843 0.045225 ...

1970-01-01 01:01:28.200 37.614015 0.155537 ...

1970-01-01 01:01:30.900 24.982222 -0.110209 ...

1970-01-01 01:01:33.600 36.512784 -0.110075 ...

1970-01-01 01:01:36.300 45.462039 -0.084373 ...

1970-01-01 01:01:39.000 29.276530 -0.013905 ...

1970-01-01 01:01:41.700 28.237235 0.154318 ...

1970-01-01 01:01:44.400 35.552612 0.242491 ...

1970-01-01 01:01:47.100 36.901995 0.075771 ...

1970-01-01 01:01:49.800 37.227747 -0.068132 ...

1970-01-01 01:01:52.500 36.612896 -0.015717 ...

1970-01-01 01:01:55.200 21.337779 0.196445 ...

1970-01-01 01:01:57.900 14.469247 0.169884 ...

1970-01-01 01:02:00.600 32.456520 0.101668 ...

1970-01-01 01:02:03.300 37.359669 0.120330 ...

1970-01-01 01:02:06.000 43.072144 -0.072104 ...

1970-01-01 01:02:08.700 38.834278 -0.026794 ...

1970-01-01 01:02:11.400 38.011946 -0.023436 ...

1970-01-01 01:02:14.100 31.018982 0.025428 ...

1970-01-01 01:02:16.800 27.618270 0.102632 ...

1970-01-01 01:02:19.500 30.427665 0.118962 ...

1970-01-01 01:02:22.200 32.725894 0.095718 ...

1970-01-01 01:02:24.900 31.185808 0.010669 ...

1970-01-01 01:02:27.600 39.390969 -0.074312 ...

acc\_phone\_z\_freq\_1.71717172\_Hz\_ws\_33 \

1970-01-01 00:58:00.300 0.186815

1970-01-01 00:58:03.000 0.206871

1970-01-01 00:58:05.700 0.926825

1970-01-01 00:58:08.400 -6.048619

1970-01-01 00:58:11.100 6.113585

1970-01-01 00:58:13.800 -3.169044

1970-01-01 00:58:16.500 -2.554545

1970-01-01 00:58:19.200 -4.221016

1970-01-01 00:58:21.900 3.727360

1970-01-01 00:58:24.600 -8.493111

1970-01-01 00:58:27.300 0.922026

1970-01-01 00:58:30.000 -2.038769

1970-01-01 00:58:32.700 -0.692277

1970-01-01 00:58:35.400 -8.342834

1970-01-01 00:58:38.100 -3.386652

1970-01-01 00:58:40.800 -2.589303

1970-01-01 00:58:43.500 4.205615

1970-01-01 00:58:46.200 -1.496324

1970-01-01 00:58:48.900 8.098668

1970-01-01 00:58:51.600 4.466819

1970-01-01 00:58:54.300 3.267010

1970-01-01 00:58:57.000 2.756688

1970-01-01 00:58:59.700 -5.175138

1970-01-01 00:59:02.400 4.196313

1970-01-01 00:59:05.100 4.636925

1970-01-01 00:59:07.800 -0.949891

1970-01-01 00:59:10.500 4.445654

1970-01-01 00:59:13.200 -8.949986

1970-01-01 00:59:15.900 3.316518

1970-01-01 00:59:18.600 3.461385

... ...

1970-01-01 01:01:09.300 -8.185663

1970-01-01 01:01:12.000 1.253826

1970-01-01 01:01:14.700 4.084745

1970-01-01 01:01:17.400 3.822840

1970-01-01 01:01:20.100 0.940171

1970-01-01 01:01:22.800 -11.265439

1970-01-01 01:01:25.500 -9.818881

1970-01-01 01:01:28.200 3.652501

1970-01-01 01:01:30.900 9.300141

1970-01-01 01:01:33.600 13.715459

1970-01-01 01:01:36.300 1.630193

1970-01-01 01:01:39.000 -1.613342

1970-01-01 01:01:41.700 -5.804811

1970-01-01 01:01:44.400 7.499774

1970-01-01 01:01:47.100 8.158098

1970-01-01 01:01:49.800 2.878001

1970-01-01 01:01:52.500 -6.250978

1970-01-01 01:01:55.200 -6.399522

1970-01-01 01:01:57.900 -12.752703

1970-01-01 01:02:00.600 2.015618

1970-01-01 01:02:03.300 6.427208

1970-01-01 01:02:06.000 4.406571

1970-01-01 01:02:08.700 -0.736454

1970-01-01 01:02:11.400 -30.345678

1970-01-01 01:02:14.100 -19.983357

1970-01-01 01:02:16.800 -5.352188

1970-01-01 01:02:19.500 -1.218939

1970-01-01 01:02:22.200 6.587164

1970-01-01 01:02:24.900 -1.891187

1970-01-01 01:02:27.600 -0.853587

gyr\_phone\_x\_freq\_1.71717172\_Hz\_ws\_33 \

1970-01-01 00:58:00.300 -0.589987

1970-01-01 00:58:03.000 -1.334706

1970-01-01 00:58:05.700 -2.643063

1970-01-01 00:58:08.400 -1.468883

1970-01-01 00:58:11.100 2.074914

1970-01-01 00:58:13.800 0.186491

1970-01-01 00:58:16.500 1.939094

1970-01-01 00:58:19.200 -2.966213

1970-01-01 00:58:21.900 -3.738763

1970-01-01 00:58:24.600 -2.402121

1970-01-01 00:58:27.300 -2.079979

1970-01-01 00:58:30.000 0.157759

1970-01-01 00:58:32.700 2.355643

1970-01-01 00:58:35.400 1.790445

1970-01-01 00:58:38.100 0.562521

1970-01-01 00:58:40.800 0.315553

1970-01-01 00:58:43.500 2.755213

1970-01-01 00:58:46.200 0.063708

1970-01-01 00:58:48.900 0.511686

1970-01-01 00:58:51.600 3.930163

1970-01-01 00:58:54.300 5.223944

1970-01-01 00:58:57.000 3.584675

1970-01-01 00:58:59.700 -1.306512

1970-01-01 00:59:02.400 -4.549572

1970-01-01 00:59:05.100 -2.519233

1970-01-01 00:59:07.800 -1.318435

1970-01-01 00:59:10.500 -0.779797

1970-01-01 00:59:13.200 -2.567349

1970-01-01 00:59:15.900 -3.934642

1970-01-01 00:59:18.600 -3.401918

... ...

1970-01-01 01:01:09.300 7.010828

1970-01-01 01:01:12.000 4.249217

1970-01-01 01:01:14.700 -1.564911

1970-01-01 01:01:17.400 -2.184637

1970-01-01 01:01:20.100 -7.535609

1970-01-01 01:01:22.800 1.339223

1970-01-01 01:01:25.500 7.845407

1970-01-01 01:01:28.200 6.614708

1970-01-01 01:01:30.900 2.399454

1970-01-01 01:01:33.600 -7.991566

1970-01-01 01:01:36.300 -5.791719

1970-01-01 01:01:39.000 0.101834

1970-01-01 01:01:41.700 5.434004

1970-01-01 01:01:44.400 3.742847

1970-01-01 01:01:47.100 -3.392118

1970-01-01 01:01:49.800 -9.233628

1970-01-01 01:01:52.500 -2.568116

1970-01-01 01:01:55.200 -0.678126

1970-01-01 01:01:57.900 7.453569

1970-01-01 01:02:00.600 0.609043

1970-01-01 01:02:03.300 -0.427361

1970-01-01 01:02:06.000 -2.918206

1970-01-01 01:02:08.700 -4.210741

1970-01-01 01:02:11.400 2.816643

1970-01-01 01:02:14.100 3.642796

1970-01-01 01:02:16.800 7.291366

1970-01-01 01:02:19.500 4.009591

1970-01-01 01:02:22.200 -4.174044

1970-01-01 01:02:24.900 -3.969599

1970-01-01 01:02:27.600 -9.060146

gyr\_phone\_y\_freq\_1.71717172\_Hz\_ws\_33 \

1970-01-01 00:58:00.300 -0.826606

1970-01-01 00:58:03.000 0.075490

1970-01-01 00:58:05.700 0.327574

1970-01-01 00:58:08.400 -0.594765

1970-01-01 00:58:11.100 3.427229

1970-01-01 00:58:13.800 -0.090192

1970-01-01 00:58:16.500 -1.566697

1970-01-01 00:58:19.200 1.288505

1970-01-01 00:58:21.900 1.897332

1970-01-01 00:58:24.600 1.697829

1970-01-01 00:58:27.300 -0.966780

1970-01-01 00:58:30.000 -2.405554

1970-01-01 00:58:32.700 1.323980

1970-01-01 00:58:35.400 3.940095

1970-01-01 00:58:38.100 0.336176

1970-01-01 00:58:40.800 1.375755

1970-01-01 00:58:43.500 1.908032

1970-01-01 00:58:46.200 -6.860509

1970-01-01 00:58:48.900 -7.330264

1970-01-01 00:58:51.600 -6.257275

1970-01-01 00:58:54.300 -0.259870

1970-01-01 00:58:57.000 0.741996

1970-01-01 00:58:59.700 -0.437851

1970-01-01 00:59:02.400 -2.696037

1970-01-01 00:59:05.100 -1.119024

1970-01-01 00:59:07.800 3.948309

1970-01-01 00:59:10.500 3.882422

1970-01-01 00:59:13.200 1.054600

1970-01-01 00:59:15.900 -1.970868

1970-01-01 00:59:18.600 -0.702112

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1970-01-01 01:01:09.300 -1.300071

1970-01-01 01:01:12.000 2.881228

1970-01-01 01:01:14.700 0.600734

1970-01-01 01:01:17.400 -0.066649

1970-01-01 01:01:20.100 -4.389906

1970-01-01 01:01:22.800 -1.718865

1970-01-01 01:01:25.500 4.476948

1970-01-01 01:01:28.200 0.579204

1970-01-01 01:01:30.900 0.871696

1970-01-01 01:01:33.600 0.402462

1970-01-01 01:01:36.300 4.491040

1970-01-01 01:01:39.000 0.174288

1970-01-01 01:01:41.700 -4.250148

1970-01-01 01:01:44.400 0.244870

1970-01-01 01:01:47.100 -0.919201

1970-01-01 01:01:49.800 -1.953646

1970-01-01 01:01:52.500 -4.786859

1970-01-01 01:01:55.200 4.698395

1970-01-01 01:01:57.900 0.528491

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1970-01-01 01:02:06.000 -3.029793

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1970-01-01 01:02:24.900 -1.011968

1970-01-01 01:02:27.600 -0.583649

gyr\_phone\_z\_freq\_1.71717172\_Hz\_ws\_33 \

1970-01-01 00:58:00.300 0.233064

1970-01-01 00:58:03.000 0.381043

1970-01-01 00:58:05.700 0.542808

1970-01-01 00:58:08.400 0.382896

1970-01-01 00:58:11.100 1.924578

1970-01-01 00:58:13.800 0.873201

1970-01-01 00:58:16.500 1.504020

1970-01-01 00:58:19.200 1.949112

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1970-01-01 00:58:30.000 0.081710

1970-01-01 00:58:32.700 1.106746

1970-01-01 00:58:35.400 1.340679

1970-01-01 00:58:38.100 1.540796

1970-01-01 00:58:40.800 1.119300

1970-01-01 00:58:43.500 -0.073314

1970-01-01 00:58:46.200 -1.522856

1970-01-01 00:58:48.900 -1.607000

1970-01-01 00:58:51.600 -1.692196

1970-01-01 00:58:54.300 -0.988320

1970-01-01 00:58:57.000 0.842605

1970-01-01 00:58:59.700 -1.001520

1970-01-01 00:59:02.400 -1.360312

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1970-01-01 00:59:07.800 -0.707671

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1970-01-01 00:59:15.900 -0.132017

1970-01-01 00:59:18.600 -0.438632

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1970-01-01 01:01:09.300 -10.769391

1970-01-01 01:01:12.000 -2.706803

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1970-01-01 01:01:17.400 5.340765

1970-01-01 01:01:20.100 6.124925

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1970-01-01 01:01:25.500 -7.539757

1970-01-01 01:01:28.200 -4.585630

1970-01-01 01:01:30.900 5.818304

1970-01-01 01:01:33.600 13.714793

1970-01-01 01:01:36.300 11.485633

1970-01-01 01:01:39.000 -2.855220

1970-01-01 01:01:41.700 -7.345018

1970-01-01 01:01:44.400 -5.436024

1970-01-01 01:01:47.100 3.849766

1970-01-01 01:01:49.800 12.870916

1970-01-01 01:01:52.500 5.759718

1970-01-01 01:01:55.200 -1.072783

1970-01-01 01:01:57.900 -10.582357

1970-01-01 01:02:00.600 -11.219505

1970-01-01 01:02:03.300 0.605427

1970-01-01 01:02:06.000 7.203543

1970-01-01 01:02:08.700 5.866253

1970-01-01 01:02:11.400 0.692641

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1970-01-01 01:02:16.800 -9.797720

1970-01-01 01:02:19.500 -1.417972

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1970-01-01 01:02:24.900 11.456078

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mag\_phone\_x\_freq\_1.71717172\_Hz\_ws\_33 \

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1970-01-01 00:58:46.200 -3.843460

1970-01-01 00:58:48.900 -2.405166

1970-01-01 00:58:51.600 -4.784830

1970-01-01 00:58:54.300 0.005531

1970-01-01 00:58:57.000 0.129260

1970-01-01 00:58:59.700 4.165781

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1970-01-01 00:59:10.500 0.897938

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1970-01-01 01:01:09.300 -1.615097

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1970-01-01 01:01:14.700 30.805943

1970-01-01 01:01:17.400 9.962307

1970-01-01 01:01:20.100 -31.789100

1970-01-01 01:01:22.800 -45.936268

1970-01-01 01:01:25.500 -19.098312

1970-01-01 01:01:28.200 31.081805

1970-01-01 01:01:30.900 35.285056

1970-01-01 01:01:33.600 28.088426

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1970-01-01 01:01:52.500 -32.964160

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1970-01-01 01:02:16.800 0.663885

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mag\_phone\_y\_freq\_1.71717172\_Hz\_ws\_33 \

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1970-01-01 00:58:05.700 -0.194030

1970-01-01 00:58:08.400 3.423763

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1970-01-01 00:58:13.800 -8.394063

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1970-01-01 00:58:32.700 0.866417

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1970-01-01 00:58:38.100 -2.328693

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1970-01-01 01:01:22.800 26.945854

1970-01-01 01:01:25.500 2.931844

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1970-01-01 01:01:30.900 -25.704803

1970-01-01 01:01:33.600 -6.240577

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1970-01-01 01:01:39.000 31.084524

1970-01-01 01:01:41.700 3.318028

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1970-01-01 01:01:47.100 -36.989970

1970-01-01 01:01:49.800 -9.749740

1970-01-01 01:01:52.500 23.465488

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mag\_phone\_z\_freq\_1.71717172\_Hz\_ws\_33 acc\_cluster \

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1970-01-01 01:01:17.400 -7.938156 3

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1970-01-01 01:01:25.500 5.073465 2

1970-01-01 01:01:28.200 22.586562 1

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gyr\_cluster mag\_cluster

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1970-01-01 01:01:12.000 3 0

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1970-01-01 01:01:25.500 0 0

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1970-01-01 01:02:27.600 1 0

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1970-01-01 01:03:43.200 -0.787132 -1.836549 1.369146 0.939074

1970-01-01 01:03:45.900 -2.290496 -1.137635 2.060032 3.661962

1970-01-01 01:03:48.600 0.145633 -4.414610 9.365850 2.957161

1970-01-01 01:03:51.300 -1.645826 -8.460208 7.421381 2.457272

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1970-01-01 01:03:56.700 -13.991127 -6.147441 5.822937 2.895991

1970-01-01 01:03:59.400 -12.730885 -7.795241 -0.115860 1.412174

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1970-01-01 01:04:04.800 -12.950535 -7.498532 6.842800 -1.325689

1970-01-01 01:04:07.500 -10.944889 -19.033408 2.306335 -1.484876

1970-01-01 01:04:10.200 -3.446353 -5.189418 -1.663457 -0.820141

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1970-01-01 01:04:18.300 -1.732167 -2.986184 1.459078 2.969236

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1970-01-01 01:06:09.000 -8.936962 2.960196 0.608496 0.182072

1970-01-01 01:06:11.700 -12.454408 3.992067 2.382191 -3.074228

1970-01-01 01:06:14.400 -2.459393 -0.005955 2.614351 -1.680328

1970-01-01 01:06:17.100 5.664034 -0.927028 4.600721 -2.435552

1970-01-01 01:06:19.800 3.924670 0.115773 0.444207 -2.998688

1970-01-01 01:06:22.500 1.636689 -3.741661 2.420243 0.041114

1970-01-01 01:06:25.200 -9.616482 -11.501232 3.728169 -1.340373

1970-01-01 01:06:27.900 -19.898836 -6.771423 -20.602830 2.069371

1970-01-01 01:06:30.600 -13.508945 -3.830892 -15.860169 2.010561

1970-01-01 01:06:33.300 -19.513863 -11.985206 4.236199 0.731072

1970-01-01 01:06:36.000 -19.709597 -22.814928 10.160014 3.043072

1970-01-01 01:06:38.700 -7.312799 -15.569152 0.594640 6.542641

1970-01-01 01:06:41.400 -0.241059 -14.133544 3.674423 1.901997

1970-01-01 01:06:44.100 -9.043385 -27.088832 0.386315 -1.684125

1970-01-01 01:06:46.800 -2.183884 -20.537201 7.581918 1.932787

1970-01-01 01:06:49.500 3.699017 -8.326032 12.255454 0.495114

1970-01-01 01:06:52.200 4.153893 -4.932756 10.909603 -3.593630

1970-01-01 01:06:54.900 3.921744 -10.673638 13.526200 -1.947470

1970-01-01 01:06:57.600 4.032914 -10.147026 8.698770 -3.880774

1970-01-01 01:07:00.300 -4.550474 4.234233 1.177341 2.648395

1970-01-01 01:07:03.000 -6.160136 1.120794 -1.231401 1.544616

1970-01-01 01:07:05.700 -9.959896 6.496785 -1.942147 0.336584

1970-01-01 01:07:08.400 0.686922 2.236817 0.997363 -1.457725

1970-01-01 01:07:11.100 5.715349 1.989748 -9.055068 0.313391

1970-01-01 01:07:13.800 4.223766 -0.617779 -0.580753 -0.416523

1970-01-01 01:07:16.500 0.009382 -2.610063 2.210526 -4.117042

1970-01-01 01:07:19.200 -9.463927 -8.864794 -10.987134 0.713467

1970-01-01 01:07:21.900 -20.535142 -11.915642 3.670668 1.447807

1970-01-01 01:07:24.600 -19.184123 -13.281955 6.624360 1.687119

1970-01-01 01:07:27.300 -18.738860 -10.490978 0.174506 0.478710

gyr\_phone\_y gyr\_phone\_z mag\_phone\_x mag\_phone\_y \

1970-01-01 01:03:00.000 -1.555641 2.082422 12.512323 41.863209

1970-01-01 01:03:02.700 0.816544 1.531022 11.628050 47.065371

1970-01-01 01:03:05.400 4.045954 1.648821 12.552541 49.169177

1970-01-01 01:03:08.100 -2.235740 0.299371 9.206106 50.734193

1970-01-01 01:03:10.800 0.233539 -0.676376 2.713150 52.375562

1970-01-01 01:03:13.500 2.343946 -0.886949 7.206736 47.602410

1970-01-01 01:03:16.200 4.525948 -1.766066 11.771546 42.857956

1970-01-01 01:03:18.900 3.676346 -0.946698 11.570958 43.490810

1970-01-01 01:03:21.600 0.627178 -0.218538 10.389875 42.610852

1970-01-01 01:03:24.300 -0.713556 0.638883 11.321359 36.748293

1970-01-01 01:03:27.000 0.168586 1.837340 17.341214 32.795349

1970-01-01 01:03:29.700 -0.162778 1.835282 15.637271 44.266376

1970-01-01 01:03:32.400 0.701780 0.974386 11.268301 49.219956

1970-01-01 01:03:35.100 -2.567945 0.516951 10.688280 49.843505

1970-01-01 01:03:37.800 -4.877214 -0.116102 9.905680 53.081332

1970-01-01 01:03:40.500 -3.666768 -0.105069 7.262964 54.563099

1970-01-01 01:03:43.200 -4.763532 0.413849 4.976899 58.655152

1970-01-01 01:03:45.900 -2.227914 -0.361864 2.247728 55.279922

1970-01-01 01:03:48.600 1.834284 -1.079127 8.702724 48.537529

1970-01-01 01:03:51.300 2.212585 -1.773504 13.486595 41.784516

1970-01-01 01:03:54.000 -0.621500 -1.645333 14.964320 40.675544

1970-01-01 01:03:56.700 4.090838 -0.674645 11.233867 42.089629

1970-01-01 01:03:59.400 0.592726 0.248416 9.828112 47.153981

1970-01-01 01:04:02.100 3.243479 2.227489 13.626031 46.657267

1970-01-01 01:04:04.800 3.706200 1.878426 11.999483 50.410625

1970-01-01 01:04:07.500 2.368673 1.481396 12.048718 52.108116

1970-01-01 01:04:10.200 2.384901 1.171656 10.973671 52.380979

1970-01-01 01:04:12.900 -0.876370 -0.450650 7.732994 50.171422

1970-01-01 01:04:15.600 -5.590392 -0.634618 3.547323 55.161767

1970-01-01 01:04:18.300 0.845925 -0.967765 2.827204 55.736291

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1970-01-01 01:06:09.000 -3.308196 -1.018464 10.414986 42.335146

1970-01-01 01:06:11.700 -1.410681 1.972164 15.927235 39.539585

1970-01-01 01:06:14.400 4.154878 -1.414069 6.016757 47.196556

1970-01-01 01:06:17.100 0.954084 2.657258 4.775007 52.348860

1970-01-01 01:06:19.800 -2.952336 -1.029167 0.642775 53.382123

1970-01-01 01:06:22.500 -0.983703 -0.630680 -5.543267 50.727165

1970-01-01 01:06:25.200 -0.857439 -3.581717 1.060983 51.413725

1970-01-01 01:06:27.900 -3.084953 -4.069968 11.730503 45.729839

1970-01-01 01:06:30.600 -2.007464 -2.860633 17.369324 39.901808

1970-01-01 01:06:33.300 0.365488 0.582680 15.827031 36.853441

1970-01-01 01:06:36.000 -5.374657 4.286208 8.386918 49.786117

1970-01-01 01:06:38.700 -5.322512 3.201754 -17.751727 57.966982

1970-01-01 01:06:41.400 -1.341943 -1.060061 -19.158846 55.059233

1970-01-01 01:06:44.100 -2.422325 -1.810695 -12.014148 51.048337

1970-01-01 01:06:46.800 4.718129 -3.912774 -4.314490 48.463785

1970-01-01 01:06:49.500 2.585215 -0.781818 7.980300 49.028377

1970-01-01 01:06:52.200 -0.858134 1.198962 4.764761 54.667597

1970-01-01 01:06:54.900 2.206568 1.429065 -0.409823 55.390530

1970-01-01 01:06:57.600 -1.317043 -1.579837 1.896846 55.607030

1970-01-01 01:07:00.300 1.991777 -1.165248 -0.933732 48.406735

1970-01-01 01:07:03.000 1.132466 0.574903 18.651744 33.924286

1970-01-01 01:07:05.700 -1.138496 3.934157 20.155783 35.167586

1970-01-01 01:07:08.400 2.851333 4.471210 14.966847 43.564350

1970-01-01 01:07:11.100 5.270473 4.650481 9.422211 47.160714

1970-01-01 01:07:13.800 -5.320964 -0.155382 -4.159274 53.165534

1970-01-01 01:07:16.500 1.886861 -3.909326 -11.472974 52.220132

1970-01-01 01:07:19.200 6.576712 -5.146545 6.429531 50.970566

1970-01-01 01:07:21.900 -1.593634 -2.860917 10.190375 43.329741

1970-01-01 01:07:24.600 -1.834604 -1.814822 17.663421 36.992714

1970-01-01 01:07:27.300 -1.399410 0.145287 7.159101 45.190858

mag\_phone\_z pca\_1 ... \

1970-01-01 01:03:00.000 43.835861 -0.139458 ...

1970-01-01 01:03:02.700 31.863799 -0.038813 ...

1970-01-01 01:03:05.400 27.149504 -0.060539 ...

1970-01-01 01:03:08.100 25.068321 -0.022049 ...

1970-01-01 01:03:10.800 32.797157 0.028702 ...

1970-01-01 01:03:13.500 34.117976 -0.086983 ...

1970-01-01 01:03:16.200 35.937346 -0.074672 ...

1970-01-01 01:03:18.900 38.831003 -0.088519 ...

1970-01-01 01:03:21.600 37.806631 -0.102960 ...

1970-01-01 01:03:24.300 50.603086 -0.143987 ...

1970-01-01 01:03:27.000 52.114603 -0.199527 ...

1970-01-01 01:03:29.700 40.655750 -0.130507 ...

1970-01-01 01:03:32.400 35.732157 -0.062863 ...

1970-01-01 01:03:35.100 25.882589 -0.029081 ...

1970-01-01 01:03:37.800 16.561045 -0.041832 ...

1970-01-01 01:03:40.500 17.732885 0.036941 ...

1970-01-01 01:03:43.200 21.573143 0.045684 ...

1970-01-01 01:03:45.900 28.911852 0.043753 ...

1970-01-01 01:03:48.600 34.124934 -0.000231 ...

1970-01-01 01:03:51.300 40.616183 -0.060800 ...

1970-01-01 01:03:54.000 42.301810 -0.135700 ...

1970-01-01 01:03:56.700 40.977717 -0.124197 ...

1970-01-01 01:03:59.400 37.631863 -0.088829 ...

1970-01-01 01:04:02.100 33.686432 -0.122799 ...

1970-01-01 01:04:04.800 26.507339 -0.087724 ...

1970-01-01 01:04:07.500 21.338463 -0.033560 ...

1970-01-01 01:04:10.200 20.630510 -0.027151 ...

1970-01-01 01:04:12.900 23.982686 -0.002477 ...

1970-01-01 01:04:15.600 23.485758 0.041359 ...

1970-01-01 01:04:18.300 25.440418 0.051413 ...

... ... ... ...

1970-01-01 01:06:09.000 39.676661 -0.118723 ...

1970-01-01 01:06:11.700 41.819892 -0.196755 ...

1970-01-01 01:06:14.400 41.104275 -0.021402 ...

1970-01-01 01:06:17.100 30.807314 0.062571 ...

1970-01-01 01:06:19.800 30.129667 0.083970 ...

1970-01-01 01:06:22.500 25.751423 0.133059 ...

1970-01-01 01:06:25.200 33.225416 0.033084 ...

1970-01-01 01:06:27.900 29.722814 -0.163858 ...

1970-01-01 01:06:30.600 38.602719 -0.200304 ...

1970-01-01 01:06:33.300 48.245402 -0.195857 ...

1970-01-01 01:06:36.000 28.679417 -0.047644 ...

1970-01-01 01:06:38.700 34.913115 0.230158 ...

1970-01-01 01:06:41.400 30.837609 0.278212 ...

1970-01-01 01:06:44.100 36.433167 0.191849 ...

1970-01-01 01:06:46.800 34.373301 0.146681 ...

1970-01-01 01:06:49.500 34.973981 0.042802 ...

1970-01-01 01:06:52.200 26.584374 0.080949 ...

1970-01-01 01:06:54.900 22.420789 0.148586 ...

1970-01-01 01:06:57.600 18.747853 0.128310 ...

1970-01-01 01:07:00.300 28.903659 0.021693 ...

1970-01-01 01:07:03.000 44.310961 -0.191507 ...

1970-01-01 01:07:05.700 48.179110 -0.244975 ...

1970-01-01 01:07:08.400 42.681009 -0.096998 ...

1970-01-01 01:07:11.100 34.508538 -0.012662 ...

1970-01-01 01:07:13.800 32.471879 0.125430 ...

1970-01-01 01:07:16.500 36.225778 0.165303 ...

1970-01-01 01:07:19.200 29.316937 -0.030077 ...

1970-01-01 01:07:21.900 32.421236 -0.126928 ...

1970-01-01 01:07:24.600 42.263732 -0.198015 ...

1970-01-01 01:07:27.300 31.939629 -0.093370 ...

acc\_phone\_z\_freq\_1.71717172\_Hz\_ws\_33 \

1970-01-01 01:03:00.000 -3.724822

1970-01-01 01:03:02.700 -6.809177

1970-01-01 01:03:05.400 -7.234601

1970-01-01 01:03:08.100 -1.758033

1970-01-01 01:03:10.800 4.477383

1970-01-01 01:03:13.500 -0.073395

1970-01-01 01:03:16.200 -0.817866

1970-01-01 01:03:18.900 0.683376

1970-01-01 01:03:21.600 -2.247627

1970-01-01 01:03:24.300 -4.616233

1970-01-01 01:03:27.000 3.368210

1970-01-01 01:03:29.700 6.616114

1970-01-01 01:03:32.400 4.040549

1970-01-01 01:03:35.100 0.437790

1970-01-01 01:03:37.800 3.496585

1970-01-01 01:03:40.500 6.565795

1970-01-01 01:03:43.200 -4.064465

1970-01-01 01:03:45.900 -1.115055

1970-01-01 01:03:48.600 0.605038

1970-01-01 01:03:51.300 8.847049

1970-01-01 01:03:54.000 7.468072

1970-01-01 01:03:56.700 -3.074618

1970-01-01 01:03:59.400 7.826505

1970-01-01 01:04:02.100 -0.578332

1970-01-01 01:04:04.800 -2.594482

1970-01-01 01:04:07.500 -7.284654

1970-01-01 01:04:10.200 -10.402189

1970-01-01 01:04:12.900 -5.358662

1970-01-01 01:04:15.600 2.692850

1970-01-01 01:04:18.300 1.592380

... ...

1970-01-01 01:06:09.000 5.084432

1970-01-01 01:06:11.700 -0.791112

1970-01-01 01:06:14.400 2.467108

1970-01-01 01:06:17.100 -5.387175

1970-01-01 01:06:19.800 -2.275633

1970-01-01 01:06:22.500 -0.619062

1970-01-01 01:06:25.200 -4.277422

1970-01-01 01:06:27.900 -4.337891

1970-01-01 01:06:30.600 13.023896

1970-01-01 01:06:33.300 -0.104610

1970-01-01 01:06:36.000 -11.295421

1970-01-01 01:06:38.700 -1.553156

1970-01-01 01:06:41.400 -19.917532

1970-01-01 01:06:44.100 5.393262

1970-01-01 01:06:46.800 -1.689427

1970-01-01 01:06:49.500 4.262413

1970-01-01 01:06:52.200 -2.608391

1970-01-01 01:06:54.900 -8.103011

1970-01-01 01:06:57.600 -9.785642

1970-01-01 01:07:00.300 6.780965

1970-01-01 01:07:03.000 5.957221

1970-01-01 01:07:05.700 13.697936

1970-01-01 01:07:08.400 1.991426

1970-01-01 01:07:11.100 1.577283

1970-01-01 01:07:13.800 -3.664923

1970-01-01 01:07:16.500 -7.972656

1970-01-01 01:07:19.200 -8.783002

1970-01-01 01:07:21.900 0.090982

1970-01-01 01:07:24.600 -0.399578

1970-01-01 01:07:27.300 0.937982

gyr\_phone\_x\_freq\_1.71717172\_Hz\_ws\_33 \

1970-01-01 01:03:00.000 0.126562

1970-01-01 01:03:02.700 -0.283905

1970-01-01 01:03:05.400 -0.790468

1970-01-01 01:03:08.100 -0.713597

1970-01-01 01:03:10.800 -0.632219

1970-01-01 01:03:13.500 -1.973163

1970-01-01 01:03:16.200 -3.661441

1970-01-01 01:03:18.900 -1.581638

1970-01-01 01:03:21.600 0.617562

1970-01-01 01:03:24.300 -1.191728

1970-01-01 01:03:27.000 -1.639444

1970-01-01 01:03:29.700 -0.990767

1970-01-01 01:03:32.400 0.913820

1970-01-01 01:03:35.100 0.789975

1970-01-01 01:03:37.800 1.615465

1970-01-01 01:03:40.500 2.040210

1970-01-01 01:03:43.200 3.286754

1970-01-01 01:03:45.900 0.885649

1970-01-01 01:03:48.600 0.875661

1970-01-01 01:03:51.300 -0.625054

1970-01-01 01:03:54.000 -0.899722

1970-01-01 01:03:56.700 -1.547403

1970-01-01 01:03:59.400 -0.576708

1970-01-01 01:04:02.100 0.485904

1970-01-01 01:04:04.800 -1.742299

1970-01-01 01:04:07.500 -0.976149

1970-01-01 01:04:10.200 -3.565335

1970-01-01 01:04:12.900 -2.543830

1970-01-01 01:04:15.600 -1.613734

1970-01-01 01:04:18.300 -2.980591

... ...

1970-01-01 01:06:09.000 -2.750354

1970-01-01 01:06:11.700 -4.585803

1970-01-01 01:06:14.400 -2.435982

1970-01-01 01:06:17.100 3.311559

1970-01-01 01:06:19.800 7.045664

1970-01-01 01:06:22.500 4.643773

1970-01-01 01:06:25.200 -0.764990

1970-01-01 01:06:27.900 -5.725512

1970-01-01 01:06:30.600 -9.764880

1970-01-01 01:06:33.300 -5.786829

1970-01-01 01:06:36.000 -1.307228

1970-01-01 01:06:38.700 -0.565859

1970-01-01 01:06:41.400 6.986581

1970-01-01 01:06:44.100 0.307148

1970-01-01 01:06:46.800 -1.879331

1970-01-01 01:06:49.500 -7.197799

1970-01-01 01:06:52.200 2.756467

1970-01-01 01:06:54.900 4.221787

1970-01-01 01:06:57.600 7.460258

1970-01-01 01:07:00.300 1.419813

1970-01-01 01:07:03.000 -1.313462

1970-01-01 01:07:05.700 -4.281894

1970-01-01 01:07:08.400 -2.069907

1970-01-01 01:07:11.100 5.344166

1970-01-01 01:07:13.800 6.074054

1970-01-01 01:07:16.500 7.862864

1970-01-01 01:07:19.200 -0.380781

1970-01-01 01:07:21.900 -6.129676

1970-01-01 01:07:24.600 -4.520716

1970-01-01 01:07:27.300 -5.400424

gyr\_phone\_y\_freq\_1.71717172\_Hz\_ws\_33 \

1970-01-01 01:03:00.000 1.758839

1970-01-01 01:03:02.700 0.868812

1970-01-01 01:03:05.400 -2.625494

1970-01-01 01:03:08.100 -0.011372

1970-01-01 01:03:10.800 3.229062

1970-01-01 01:03:13.500 3.035643

1970-01-01 01:03:16.200 -0.055632

1970-01-01 01:03:18.900 -2.233043

1970-01-01 01:03:21.600 4.313152

1970-01-01 01:03:24.300 0.588673

1970-01-01 01:03:27.000 -2.634201

1970-01-01 01:03:29.700 -0.370903

1970-01-01 01:03:32.400 2.172594

1970-01-01 01:03:35.100 6.143472

1970-01-01 01:03:37.800 5.439886

1970-01-01 01:03:40.500 -2.345465

1970-01-01 01:03:43.200 -2.028381

1970-01-01 01:03:45.900 0.650759

1970-01-01 01:03:48.600 -2.842965

1970-01-01 01:03:51.300 -9.386703

1970-01-01 01:03:54.000 -4.848314

1970-01-01 01:03:56.700 -2.094385

1970-01-01 01:03:59.400 -1.238101

1970-01-01 01:04:02.100 -0.460269

1970-01-01 01:04:04.800 -6.771793

1970-01-01 01:04:07.500 -3.338176

1970-01-01 01:04:10.200 -4.555918

1970-01-01 01:04:12.900 2.375648

1970-01-01 01:04:15.600 6.367564

1970-01-01 01:04:18.300 1.415433

... ...

1970-01-01 01:06:09.000 1.783534

1970-01-01 01:06:11.700 -0.170747

1970-01-01 01:06:14.400 -5.832692

1970-01-01 01:06:17.100 -3.344820

1970-01-01 01:06:19.800 1.405666

1970-01-01 01:06:22.500 -3.192301

1970-01-01 01:06:25.200 5.833486

1970-01-01 01:06:27.900 6.423242

1970-01-01 01:06:30.600 3.900515

1970-01-01 01:06:33.300 -1.690076

1970-01-01 01:06:36.000 -2.476986

1970-01-01 01:06:38.700 2.626053

1970-01-01 01:06:41.400 -3.927119

1970-01-01 01:06:44.100 4.859247

1970-01-01 01:06:46.800 -2.982171

1970-01-01 01:06:49.500 -2.549635

1970-01-01 01:06:52.200 -0.712330

1970-01-01 01:06:54.900 -4.456976

1970-01-01 01:06:57.600 2.404129

1970-01-01 01:07:00.300 6.649515

1970-01-01 01:07:03.000 6.266275

1970-01-01 01:07:05.700 -0.551973

1970-01-01 01:07:08.400 -4.051585

1970-01-01 01:07:11.100 -8.919174

1970-01-01 01:07:13.800 9.016438

1970-01-01 01:07:16.500 0.258974

1970-01-01 01:07:19.200 -2.095452

1970-01-01 01:07:21.900 1.324504

1970-01-01 01:07:24.600 -2.707980

1970-01-01 01:07:27.300 2.445880

gyr\_phone\_z\_freq\_1.71717172\_Hz\_ws\_33 \

1970-01-01 01:03:00.000 -1.345748

1970-01-01 01:03:02.700 -0.607161

1970-01-01 01:03:05.400 -0.947795

1970-01-01 01:03:08.100 0.678933

1970-01-01 01:03:10.800 -0.899619

1970-01-01 01:03:13.500 -0.887620

1970-01-01 01:03:16.200 1.189726

1970-01-01 01:03:18.900 0.056472

1970-01-01 01:03:21.600 1.087941

1970-01-01 01:03:24.300 1.893946

1970-01-01 01:03:27.000 0.517847

1970-01-01 01:03:29.700 -0.174567

1970-01-01 01:03:32.400 0.410250

1970-01-01 01:03:35.100 0.973286

1970-01-01 01:03:37.800 0.212412

1970-01-01 01:03:40.500 -0.096078

1970-01-01 01:03:43.200 -0.518573

1970-01-01 01:03:45.900 0.416470

1970-01-01 01:03:48.600 0.871025

1970-01-01 01:03:51.300 0.497761

1970-01-01 01:03:54.000 1.364260

1970-01-01 01:03:56.700 -0.251968

1970-01-01 01:03:59.400 0.135365

1970-01-01 01:04:02.100 -1.776672

1970-01-01 01:04:04.800 -1.159752

1970-01-01 01:04:07.500 -1.277719

1970-01-01 01:04:10.200 -1.569469

1970-01-01 01:04:12.900 0.481786

1970-01-01 01:04:15.600 0.203852

1970-01-01 01:04:18.300 -0.047641

... ...

1970-01-01 01:06:09.000 7.426226

1970-01-01 01:06:11.700 4.353301

1970-01-01 01:06:14.400 4.941148

1970-01-01 01:06:17.100 -6.681328

1970-01-01 01:06:19.800 -8.673394

1970-01-01 01:06:22.500 -4.324177

1970-01-01 01:06:25.200 0.404399

1970-01-01 01:06:27.900 9.978315

1970-01-01 01:06:30.600 8.863129

1970-01-01 01:06:33.300 1.257360

1970-01-01 01:06:36.000 -7.922874

1970-01-01 01:06:38.700 -11.085991

1970-01-01 01:06:41.400 -6.617002

1970-01-01 01:06:44.100 3.001966

1970-01-01 01:06:46.800 14.928021

1970-01-01 01:06:49.500 10.737155

1970-01-01 01:06:52.200 4.261751

1970-01-01 01:06:54.900 -7.068800

1970-01-01 01:06:57.600 -9.838936

1970-01-01 01:07:00.300 -3.888266

1970-01-01 01:07:03.000 5.656307

1970-01-01 01:07:05.700 4.846476

1970-01-01 01:07:08.400 -0.264793

1970-01-01 01:07:11.100 -11.351908

1970-01-01 01:07:13.800 -7.225801

1970-01-01 01:07:16.500 -0.110848

1970-01-01 01:07:19.200 5.987079

1970-01-01 01:07:21.900 13.674976

1970-01-01 01:07:24.600 10.161830

1970-01-01 01:07:27.300 -0.211058

mag\_phone\_x\_freq\_1.71717172\_Hz\_ws\_33 \

1970-01-01 01:03:00.000 -9.078849

1970-01-01 01:03:02.700 -10.163318

1970-01-01 01:03:05.400 -7.258845

1970-01-01 01:03:08.100 -0.209110

1970-01-01 01:03:10.800 2.727477

1970-01-01 01:03:13.500 1.166718

1970-01-01 01:03:16.200 0.198038

1970-01-01 01:03:18.900 -3.111037

1970-01-01 01:03:21.600 -1.676646

1970-01-01 01:03:24.300 -0.611781

1970-01-01 01:03:27.000 -1.347907

1970-01-01 01:03:29.700 -0.194419

1970-01-01 01:03:32.400 -0.979906

1970-01-01 01:03:35.100 -4.018888

1970-01-01 01:03:37.800 -2.314925

1970-01-01 01:03:40.500 -1.001785

1970-01-01 01:03:43.200 -6.047168

1970-01-01 01:03:45.900 1.519644

1970-01-01 01:03:48.600 -2.888441

1970-01-01 01:03:51.300 -0.406798

1970-01-01 01:03:54.000 -2.330507

1970-01-01 01:03:56.700 1.061105

1970-01-01 01:03:59.400 5.826527

1970-01-01 01:04:02.100 6.360226

1970-01-01 01:04:04.800 3.784435

1970-01-01 01:04:07.500 1.907949

1970-01-01 01:04:10.200 -0.153050

1970-01-01 01:04:12.900 2.813534

1970-01-01 01:04:15.600 4.812222

1970-01-01 01:04:18.300 6.156331

... ...

1970-01-01 01:06:09.000 10.101642

1970-01-01 01:06:11.700 -13.811010

1970-01-01 01:06:14.400 -32.386567

1970-01-01 01:06:17.100 -48.071106

1970-01-01 01:06:19.800 -8.431663

1970-01-01 01:06:22.500 38.782777

1970-01-01 01:06:25.200 34.147071

1970-01-01 01:06:27.900 34.742712

1970-01-01 01:06:30.600 -9.216425

1970-01-01 01:06:33.300 -49.641083

1970-01-01 01:06:36.000 -57.574035

1970-01-01 01:06:38.700 -12.485576

1970-01-01 01:06:41.400 32.799263

1970-01-01 01:06:44.100 72.651215

1970-01-01 01:06:46.800 48.988482

1970-01-01 01:06:49.500 -9.131527

1970-01-01 01:06:52.200 -54.286565

1970-01-01 01:06:54.900 -43.686259

1970-01-01 01:06:57.600 -3.739308

1970-01-01 01:07:00.300 50.559160

1970-01-01 01:07:03.000 23.518511

1970-01-01 01:07:05.700 -6.711483

1970-01-01 01:07:08.400 -54.948471

1970-01-01 01:07:11.100 -51.267379

1970-01-01 01:07:13.800 2.351886

1970-01-01 01:07:16.500 30.474058

1970-01-01 01:07:19.200 45.735698

1970-01-01 01:07:21.900 26.865532

1970-01-01 01:07:24.600 -25.411034

1970-01-01 01:07:27.300 -45.901061

mag\_phone\_y\_freq\_1.71717172\_Hz\_ws\_33 \

1970-01-01 01:03:00.000 13.496889

1970-01-01 01:03:02.700 10.287612

1970-01-01 01:03:05.400 8.382057

1970-01-01 01:03:08.100 0.495178

1970-01-01 01:03:10.800 -6.522943

1970-01-01 01:03:13.500 -5.289442

1970-01-01 01:03:16.200 -0.482062

1970-01-01 01:03:18.900 1.651240

1970-01-01 01:03:21.600 4.556127

1970-01-01 01:03:24.300 2.626657

1970-01-01 01:03:27.000 3.111279

1970-01-01 01:03:29.700 -1.442938

1970-01-01 01:03:32.400 -1.882768

1970-01-01 01:03:35.100 -5.267307

1970-01-01 01:03:37.800 -8.663943

1970-01-01 01:03:40.500 -3.876993

1970-01-01 01:03:43.200 -0.532812

1970-01-01 01:03:45.900 -6.759945

1970-01-01 01:03:48.600 -2.049064

1970-01-01 01:03:51.300 -3.904033

1970-01-01 01:03:54.000 -3.670108

1970-01-01 01:03:56.700 -3.225520

1970-01-01 01:03:59.400 -6.181258

1970-01-01 01:04:02.100 -9.565010

1970-01-01 01:04:04.800 -3.513027

1970-01-01 01:04:07.500 2.125482

1970-01-01 01:04:10.200 6.978811

1970-01-01 01:04:12.900 6.060161

1970-01-01 01:04:15.600 1.609867

1970-01-01 01:04:18.300 -4.902122

... ...

1970-01-01 01:06:09.000 -0.060750

1970-01-01 01:06:11.700 10.367422

1970-01-01 01:06:14.400 20.208989

1970-01-01 01:06:17.100 21.581191

1970-01-01 01:06:19.800 -2.758685

1970-01-01 01:06:22.500 -23.962984

1970-01-01 01:06:25.200 -26.147554

1970-01-01 01:06:27.900 -15.904634

1970-01-01 01:06:30.600 15.886016

1970-01-01 01:06:33.300 37.780950

1970-01-01 01:06:36.000 28.117597

1970-01-01 01:06:38.700 1.697409

1970-01-01 01:06:41.400 -19.755338

1970-01-01 01:06:44.100 -37.328492

1970-01-01 01:06:46.800 -18.111040

1970-01-01 01:06:49.500 13.459571

1970-01-01 01:06:52.200 28.742598

1970-01-01 01:06:54.900 14.884512

1970-01-01 01:06:57.600 -14.695583

1970-01-01 01:07:00.300 -28.162453

1970-01-01 01:07:03.000 -6.099159

1970-01-01 01:07:05.700 18.770579

1970-01-01 01:07:08.400 39.998066

1970-01-01 01:07:11.100 28.519670

1970-01-01 01:07:13.800 -12.053898

1970-01-01 01:07:16.500 -24.378653

1970-01-01 01:07:19.200 -30.755686

1970-01-01 01:07:21.900 -7.364129

1970-01-01 01:07:24.600 26.610349

1970-01-01 01:07:27.300 31.468839

mag\_phone\_z\_freq\_1.71717172\_Hz\_ws\_33 acc\_cluster \

1970-01-01 01:03:00.000 -17.150026 1

1970-01-01 01:03:02.700 -6.071908 1

1970-01-01 01:03:05.400 1.142257 1

1970-01-01 01:03:08.100 4.918712 1

1970-01-01 01:03:10.800 6.776687 3

1970-01-01 01:03:13.500 10.742024 3

1970-01-01 01:03:16.200 7.785030 1

1970-01-01 01:03:18.900 9.390024 0

1970-01-01 01:03:21.600 2.857482 1

1970-01-01 01:03:24.300 2.283066 1

1970-01-01 01:03:27.000 -2.674945 3

1970-01-01 01:03:29.700 2.212764 1

1970-01-01 01:03:32.400 2.989254 1

1970-01-01 01:03:35.100 17.773044 1

1970-01-01 01:03:37.800 18.224297 1

1970-01-01 01:03:40.500 11.665635 1

1970-01-01 01:03:43.200 6.824755 1

1970-01-01 01:03:45.900 10.990055 1

1970-01-01 01:03:48.600 6.320696 1

1970-01-01 01:03:51.300 0.773760 1

1970-01-01 01:03:54.000 2.278753 1

1970-01-01 01:03:56.700 9.360757 1

1970-01-01 01:03:59.400 -2.648675 1

1970-01-01 01:04:02.100 2.924894 1

1970-01-01 01:04:04.800 -4.976050 1

1970-01-01 01:04:07.500 -10.688443 0

1970-01-01 01:04:10.200 -14.127714 1

1970-01-01 01:04:12.900 -11.173832 2

1970-01-01 01:04:15.600 -0.786522 3

1970-01-01 01:04:18.300 8.987363 1

... ... ...

1970-01-01 01:06:09.000 -11.663196 3

1970-01-01 01:06:11.700 -19.415580 3

1970-01-01 01:06:14.400 -25.599487 1

1970-01-01 01:06:17.100 -17.407849 2

1970-01-01 01:06:19.800 11.060275 2

1970-01-01 01:06:22.500 39.500276 2

1970-01-01 01:06:25.200 36.026672 1

1970-01-01 01:06:27.900 23.483714 3

1970-01-01 01:06:30.600 -12.841911 3

1970-01-01 01:06:33.300 -45.394270 0

1970-01-01 01:06:36.000 -25.541712 0

1970-01-01 01:06:38.700 -7.060681 0

1970-01-01 01:06:41.400 15.731858 1

1970-01-01 01:06:44.100 34.758187 0

1970-01-01 01:06:46.800 14.132749 0

1970-01-01 01:06:49.500 -11.569969 2

1970-01-01 01:06:52.200 -28.318539 2

1970-01-01 01:06:54.900 -5.928651 2

1970-01-01 01:06:57.600 31.091024 2

1970-01-01 01:07:00.300 40.439013 3

1970-01-01 01:07:03.000 4.300340 3

1970-01-01 01:07:05.700 -29.010571 3

1970-01-01 01:07:08.400 -48.325837 2

1970-01-01 01:07:11.100 -38.739455 2

1970-01-01 01:07:13.800 13.195262 2

1970-01-01 01:07:16.500 27.509737 1

1970-01-01 01:07:19.200 35.834737 1

1970-01-01 01:07:21.900 2.288629 0

1970-01-01 01:07:24.600 -25.134643 0

1970-01-01 01:07:27.300 -25.950702 0

gyr\_cluster mag\_cluster

1970-01-01 01:03:00.000 0 0

1970-01-01 01:03:02.700 0 0

1970-01-01 01:03:05.400 0 0

1970-01-01 01:03:08.100 3 0

1970-01-01 01:03:10.800 2 0

1970-01-01 01:03:13.500 2 0

1970-01-01 01:03:16.200 2 0

1970-01-01 01:03:18.900 2 0

1970-01-01 01:03:21.600 1 0

1970-01-01 01:03:24.300 1 0

1970-01-01 01:03:27.000 0 0

1970-01-01 01:03:29.700 0 0

1970-01-01 01:03:32.400 0 0

1970-01-01 01:03:35.100 3 0

1970-01-01 01:03:37.800 3 0

1970-01-01 01:03:40.500 3 0

1970-01-01 01:03:43.200 3 0

1970-01-01 01:03:45.900 3 0

1970-01-01 01:03:48.600 2 0

1970-01-01 01:03:51.300 2 0

1970-01-01 01:03:54.000 3 0

1970-01-01 01:03:56.700 2 0

1970-01-01 01:03:59.400 1 0

1970-01-01 01:04:02.100 0 0

1970-01-01 01:04:04.800 0 0

1970-01-01 01:04:07.500 0 0

1970-01-01 01:04:10.200 0 0

1970-01-01 01:04:12.900 3 0

1970-01-01 01:04:15.600 3 0

1970-01-01 01:04:18.300 2 0

... ... ...

1970-01-01 01:06:09.000 3 0

1970-01-01 01:06:11.700 0 0

1970-01-01 01:06:14.400 2 0

1970-01-01 01:06:17.100 0 0

1970-01-01 01:06:19.800 3 0

1970-01-01 01:06:22.500 3 0

1970-01-01 01:06:25.200 3 0

1970-01-01 01:06:27.900 3 0

1970-01-01 01:06:30.600 3 0

1970-01-01 01:06:33.300 1 0

1970-01-01 01:06:36.000 3 0

1970-01-01 01:06:38.700 3 0

1970-01-01 01:06:41.400 3 0

1970-01-01 01:06:44.100 3 0

1970-01-01 01:06:46.800 2 0

1970-01-01 01:06:49.500 2 0

1970-01-01 01:06:52.200 0 0

1970-01-01 01:06:54.900 0 0

1970-01-01 01:06:57.600 0 0

1970-01-01 01:07:00.300 2 0

1970-01-01 01:07:03.000 1 0

1970-01-01 01:07:05.700 0 0

1970-01-01 01:07:08.400 0 0

1970-01-01 01:07:11.100 2 0

1970-01-01 01:07:13.800 3 0

1970-01-01 01:07:16.500 0 0

1970-01-01 01:07:19.200 2 0

1970-01-01 01:07:21.900 3 0

1970-01-01 01:07:24.600 3 0

1970-01-01 01:07:27.300 3 0

[89 rows x 231 columns] 1970-01-01 00:58:00.300 labelwalking

1970-01-01 00:58:03.000 labelwalking

1970-01-01 00:58:05.700 labelwalking

1970-01-01 00:58:08.400 labelwalking

1970-01-01 00:58:11.100 labelwalking

1970-01-01 00:58:13.800 labelwalking

1970-01-01 00:58:16.500 labelwalking

1970-01-01 00:58:19.200 labelwalking

1970-01-01 00:58:21.900 labelwalking

1970-01-01 00:58:24.600 labelwalking

1970-01-01 00:58:27.300 labelwalking

1970-01-01 00:58:30.000 labelwalking

1970-01-01 00:58:32.700 labelwalking

1970-01-01 00:58:35.400 labelwalking

1970-01-01 00:58:38.100 labelwalking

1970-01-01 00:58:40.800 labelwalking

1970-01-01 00:58:43.500 labelwalking

1970-01-01 00:58:46.200 labelwalking

1970-01-01 00:58:48.900 labelwalking

1970-01-01 00:58:51.600 labelwalking

1970-01-01 00:58:54.300 labelwalking

1970-01-01 00:58:57.000 labelwalking

1970-01-01 00:58:59.700 labelwalking

1970-01-01 00:59:02.400 labelwalking

1970-01-01 00:59:05.100 labelwalking

1970-01-01 00:59:07.800 labelwalking

1970-01-01 00:59:10.500 labelwalking

1970-01-01 00:59:13.200 labelwalking

1970-01-01 00:59:15.900 labelwalking

1970-01-01 00:59:18.600 labelwalking

...

1970-01-01 01:01:09.300 labelrunning

1970-01-01 01:01:12.000 labelrunning

1970-01-01 01:01:14.700 labelrunning

1970-01-01 01:01:17.400 labelrunning

1970-01-01 01:01:20.100 labelrunning

1970-01-01 01:01:22.800 labelrunning

1970-01-01 01:01:25.500 labelrunning

1970-01-01 01:01:28.200 labelrunning

1970-01-01 01:01:30.900 labelrunning

1970-01-01 01:01:33.600 labelrunning

1970-01-01 01:01:36.300 labelrunning

1970-01-01 01:01:39.000 labelrunning

1970-01-01 01:01:41.700 labelrunning

1970-01-01 01:01:44.400 labelrunning

1970-01-01 01:01:47.100 labelrunning

1970-01-01 01:01:49.800 labelrunning

1970-01-01 01:01:52.500 labelrunning

1970-01-01 01:01:55.200 labelrunning

1970-01-01 01:01:57.900 labelrunning

1970-01-01 01:02:00.600 labelrunning

1970-01-01 01:02:03.300 labelrunning

1970-01-01 01:02:06.000 labelrunning

1970-01-01 01:02:08.700 labelrunning

1970-01-01 01:02:11.400 labelrunning

1970-01-01 01:02:14.100 labelrunning

1970-01-01 01:02:16.800 labelrunning

1970-01-01 01:02:19.500 labelrunning

1970-01-01 01:02:22.200 labelrunning

1970-01-01 01:02:24.900 labelrunning

1970-01-01 01:02:27.600 labelrunning

Name: class, dtype: object 1970-01-01 01:03:00.000 labelwalking

1970-01-01 01:03:02.700 labelwalking

1970-01-01 01:03:05.400 labelwalking

1970-01-01 01:03:08.100 labelwalking

1970-01-01 01:03:10.800 labelwalking

1970-01-01 01:03:13.500 labelwalking

1970-01-01 01:03:16.200 labelwalking

1970-01-01 01:03:18.900 labelwalking

1970-01-01 01:03:21.600 labelwalking

1970-01-01 01:03:24.300 labelwalking

1970-01-01 01:03:27.000 labelwalking

1970-01-01 01:03:29.700 labelwalking

1970-01-01 01:03:32.400 labelwalking

1970-01-01 01:03:35.100 labelwalking

1970-01-01 01:03:37.800 labelwalking

1970-01-01 01:03:40.500 labelwalking

1970-01-01 01:03:43.200 labelwalking

1970-01-01 01:03:45.900 labelwalking

1970-01-01 01:03:48.600 labelwalking

1970-01-01 01:03:51.300 labelwalking

1970-01-01 01:03:54.000 labelwalking

1970-01-01 01:03:56.700 labelwalking

1970-01-01 01:03:59.400 labelwalking

1970-01-01 01:04:02.100 labelwalking

1970-01-01 01:04:04.800 labelwalking

1970-01-01 01:04:07.500 labelwalking

1970-01-01 01:04:10.200 labelwalking

1970-01-01 01:04:12.900 labelwalking

1970-01-01 01:04:15.600 labelwalking

1970-01-01 01:04:18.300 labelwalking

...

1970-01-01 01:06:09.000 labelrunning

1970-01-01 01:06:11.700 labelrunning

1970-01-01 01:06:14.400 labelrunning

1970-01-01 01:06:17.100 labelrunning

1970-01-01 01:06:19.800 labelrunning

1970-01-01 01:06:22.500 labelrunning

1970-01-01 01:06:25.200 labelrunning

1970-01-01 01:06:27.900 labelrunning

1970-01-01 01:06:30.600 labelrunning

1970-01-01 01:06:33.300 labelrunning

1970-01-01 01:06:36.000 labelrunning

1970-01-01 01:06:38.700 labelrunning

1970-01-01 01:06:41.400 labelrunning

1970-01-01 01:06:44.100 labelrunning

1970-01-01 01:06:46.800 labelrunning

1970-01-01 01:06:49.500 labelrunning

1970-01-01 01:06:52.200 labelrunning

1970-01-01 01:06:54.900 labelrunning

1970-01-01 01:06:57.600 labelrunning

1970-01-01 01:07:00.300 labelrunning

1970-01-01 01:07:03.000 labelrunning

1970-01-01 01:07:05.700 labelrunning

1970-01-01 01:07:08.400 labelrunning

1970-01-01 01:07:11.100 labelrunning

1970-01-01 01:07:13.800 labelrunning

1970-01-01 01:07:16.500 labelrunning

1970-01-01 01:07:19.200 labelrunning

1970-01-01 01:07:21.900 labelrunning

1970-01-01 01:07:24.600 labelrunning

1970-01-01 01:07:27.300 labelrunning

Name: class, dtype: object

Training set length is: 89

Test set length is: 89

#basic features: 9

#PCA features: 4

#time features: 26

#frequency features: 189

#cluster features: 3

C:\Users\whitn\Anaconda2\envs\ml4qs2\lib\site-packages\sklearn\neural\_network\multilayer\_perceptron.py:563: ConvergenceWarning: Stochastic Optimizer: Maximum iterations reached and the optimization hasn't converged yet.

% (), ConvergenceWarning)

initial set & 0.9685 \emph{( 0.9315 - 1.0055 )} & 0.7708 \emph{( 0.6817 - 0.8599 )} & 0.9663 \emph{( 0.9280 - 1.0046 )} & 0.7910 \emph{( 0.7048 - 0.8772 )} & 0.9326 \emph{( 0.8794 - 0.9857 )} & 0.7865 \emph{( 0.6996 - 0.8734 )} & 0.8876 \emph{( 0.8207 - 0.9546 )} & 0.7416 \emph{( 0.6488 - 0.8344 )} & 0.8652 \emph{( 0.7928 - 0.9376 )} & 0.7079 \emph{( 0.6115 - 0.8043 )} & 0.8876 \emph{( 0.8207 - 0.9546 )} & 0.7640 \emph{( 0.6740 - 0.8541 )} \\\hline

Chapter 3 & 0.9640 \emph{( 0.9246 - 1.0035 )} & 0.7685 \emph{( 0.6791 - 0.8580 )} & 0.9236 \emph{( 0.8673 - 0.9799 )} & 0.6921 \emph{( 0.5943 - 0.7900 )} & 0.9326 \emph{( 0.8794 - 0.9857 )} & 0.7865 \emph{( 0.6996 - 0.8734 )} & 0.8876 \emph{( 0.8207 - 0.9546 )} & 0.7416 \emph{( 0.6488 - 0.8344 )} & 0.8652 \emph{( 0.7928 - 0.9376 )} & 0.7079 \emph{( 0.6115 - 0.8043 )} & 0.8652 \emph{( 0.7928 - 0.9376 )} & 0.7416 \emph{( 0.6488 - 0.8344 )} \\\hline

Chapter 4 & 0.8674 \emph{( 0.7955 - 0.9393 )} & 0.7528 \emph{( 0.6614 - 0.8443 )} & 0.9955 \emph{( 0.9813 - 1.0097 )} & 0.9596 \emph{( 0.9178 - 1.0013 )} & 1.0000 \emph{( 1.0000 - 1.0000 )} & 0.9213 \emph{( 0.8643 - 0.9784 )} & 1.0000 \emph{( 1.0000 - 1.0000 )} & 0.9326 \emph{( 0.8794 - 0.9857 )} & 0.9663 \emph{( 0.9280 - 1.0046 )} & 0.9551 \emph{( 0.9111 - 0.9990 )} & 0.9775 \emph{( 0.9461 - 1.0089 )} & 0.9438 \emph{( 0.8950 - 0.9926 )} \\\hline

Chapter 5 & 0.8899 \emph{( 0.8235 - 0.9562 )} & 0.7393 \emph{( 0.6463 - 0.8324 )} & 0.9775 \emph{( 0.9461 - 1.0089 )} & 0.9573 \emph{( 0.9144 - 1.0002 )} & 1.0000 \emph{( 1.0000 - 1.0000 )} & 0.9213 \emph{( 0.8643 - 0.9784 )} & 1.0000 \emph{( 1.0000 - 1.0000 )} & 0.9326 \emph{( 0.8794 - 0.9857 )} & 0.9663 \emph{( 0.9280 - 1.0046 )} & 0.9551 \emph{( 0.9111 - 0.9990 )} & 0.9775 \emph{( 0.9461 - 1.0089 )} & 0.9438 \emph{( 0.8950 - 0.9926 )} \\\hline

Selected features & 0.9978 \emph{( 0.9877 - 1.0078 )} & 0.8539 \emph{( 0.7791 - 0.9288 )} & 0.9933 \emph{( 0.9759 - 1.0106 )} & 0.8742 \emph{( 0.8038 - 0.9445 )} & 0.9326 \emph{( 0.8794 - 0.9857 )} & 0.9326 \emph{( 0.8794 - 0.9857 )} & 0.8764 \emph{( 0.8066 - 0.9462 )} & 0.9213 \emph{( 0.8643 - 0.9784 )} & 1.0000 \emph{( 1.0000 - 1.0000 )} & 0.6292 \emph{( 0.5268 - 0.7316 )} & 1.0000 \emph{( 1.0000 - 1.0000 )} & 0.8989 \emph{( 0.8350 - 0.9628 )} \\\hline

{'criterion': 'entropy', 'min\_samples\_leaf': 2}

Feature importance decision tree:

mag\_phone\_z\_temp\_mean\_ws\_100 & 0.635400562832

mag\_phone\_x\_freq\_0.0\_Hz\_ws\_33 & 0.283476533054

pca\_2\_temp\_mean\_ws\_100 & 0.081122904114

mag\_phone\_y\_freq\_0.10101010101\_Hz\_ws\_33 & 0.0

mag\_phone\_y\_freq\_1.61616161616\_Hz\_ws\_33 & 0.0

gyr\_phone\_z\_freq\_0.909090909091\_Hz\_ws\_33 & 0.0

acc\_phone\_z\_freq\_0.808080808081\_Hz\_ws\_33 & 0.0

gyr\_phone\_z\_freq\_0.30303030303\_Hz\_ws\_33 & 0.0

mag\_phone\_z\_pse & 0.0

mag\_phone\_z\_freq\_1.71717172\_Hz\_ws\_33 & 0.0

acc\_phone\_z\_freq\_0.30303030303\_Hz\_ws\_33 & 0.0

acc\_phone\_z\_freq\_0.40404040404\_Hz\_ws\_33 & 0.0

acc\_phone\_z\_freq\_1.41414141414\_Hz\_ws\_33 & 0.0

mag\_phone\_z\_freq\_weighted & 0.0

gyr\_phone\_y\_freq\_0.909090909091\_Hz\_ws\_33 & 0.0

mag\_phone\_y\_freq\_0.606060606061\_Hz\_ws\_33 & 0.0

gyr\_phone\_y\_freq\_0.707070707071\_Hz\_ws\_33 & 0.0

acc\_phone\_z\_freq\_0.10101010101\_Hz\_ws\_33 & 0.0

gyr\_phone\_y\_freq\_1.41414141414\_Hz\_ws\_33 & 0.0

acc\_phone\_x\_freq\_1.0101010101\_Hz\_ws\_33 & 0.0

{'n\_estimators': 10, 'criterion': 'entropy', 'min\_samples\_leaf': 10}

Feature importance random forest:

mag\_phone\_z\_temp\_mean\_ws\_100 & 0.316116862842

gyr\_phone\_y\_freq\_0.909090909091\_Hz\_ws\_33 & 0.171801724604

mag\_phone\_x\_freq\_0.0\_Hz\_ws\_33 & 0.133974879677

mag\_phone\_y\_freq\_1.61616161616\_Hz\_ws\_33 & 0.0787043665401

gyr\_phone\_y\_freq\_0.707070707071\_Hz\_ws\_33 & 0.0750836813043

gyr\_phone\_z\_freq\_0.909090909091\_Hz\_ws\_33 & 0.0454514216398

mag\_phone\_z\_freq\_1.71717172\_Hz\_ws\_33 & 0.0269274938862

acc\_phone\_x\_freq\_1.0101010101\_Hz\_ws\_33 & 0.0258177113338

gyr\_phone\_z\_freq\_0.30303030303\_Hz\_ws\_33 & 0.0249163186957

acc\_phone\_z\_freq\_0.40404040404\_Hz\_ws\_33 & 0.0217068135542

mag\_phone\_z\_freq\_weighted & 0.0208035376498

acc\_phone\_z\_freq\_1.41414141414\_Hz\_ws\_33 & 0.0166949513327

mag\_phone\_y\_freq\_0.606060606061\_Hz\_ws\_33 & 0.0153201999981

gyr\_phone\_y\_freq\_1.41414141414\_Hz\_ws\_33 & 0.0119726972637

acc\_phone\_z\_freq\_0.10101010101\_Hz\_ws\_33 & 0.00876269122583

mag\_phone\_z\_pse & 0.00594464845215

pca\_2\_temp\_mean\_ws\_100 & 0.0

mag\_phone\_y\_freq\_0.10101010101\_Hz\_ws\_33 & 0.0

acc\_phone\_z\_freq\_0.808080808081\_Hz\_ws\_33 & 0.0

acc\_phone\_z\_freq\_0.30303030303\_Hz\_ws\_33 & 0.0

Process finished with exit code 0