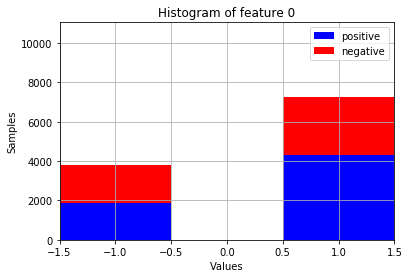
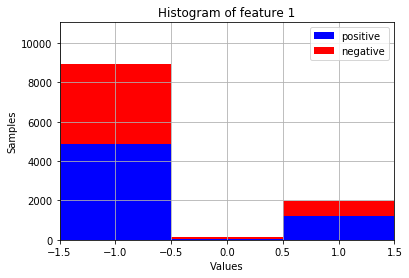
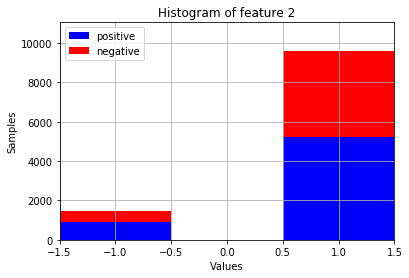
runfile('D:/Documents/GitHub/Data-Analysis-and-Data-Mining/temp.py', wdir='D:/Documents/GitHub/Data-Analysis-and-Data-Mining')



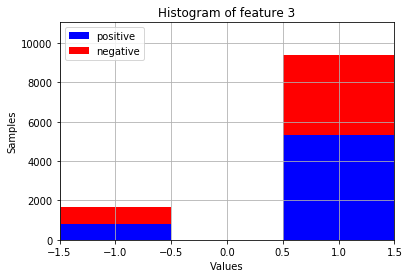
0.9015329094423445



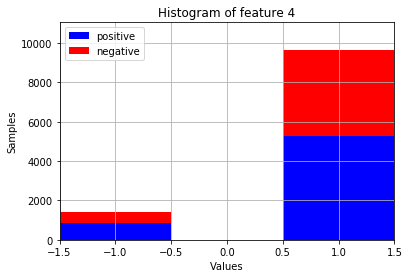
0.586849069483336



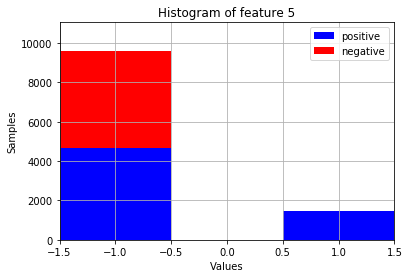
0.45423256645511445



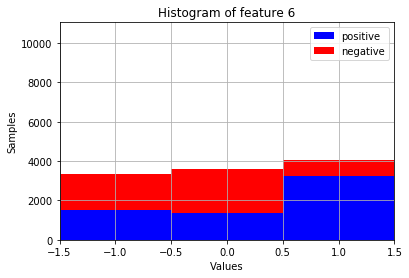
0.5091764973496629



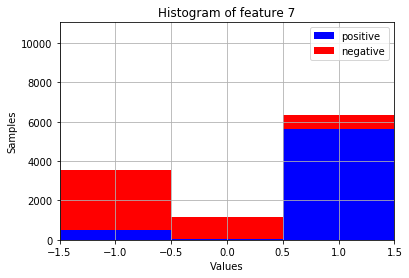
0.45021564600002245



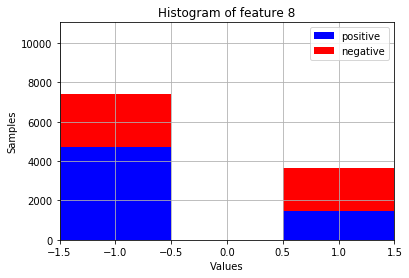
0.4598315114120981



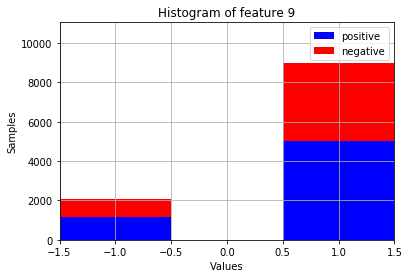
0.6682754640923749



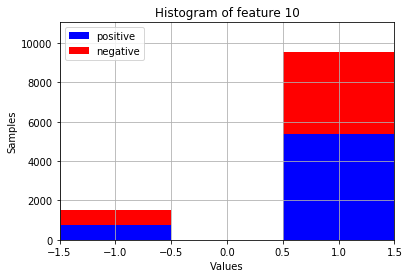
0.8314724555749988



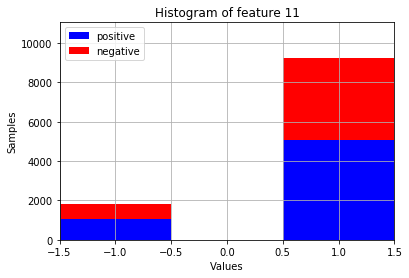
0.8865855010135362



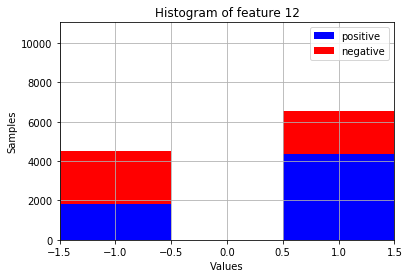
0.604881713712699



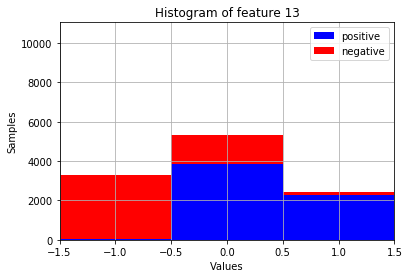
0.4696260811807636



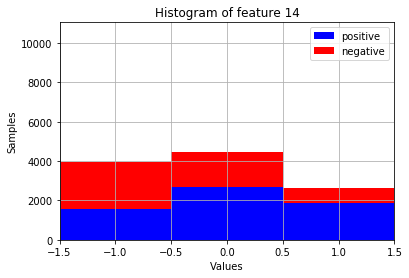
0.5442681416322701



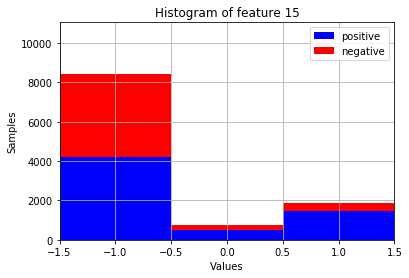
0.9651082607601864



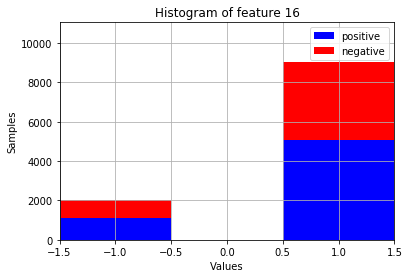
0.5113757228413058



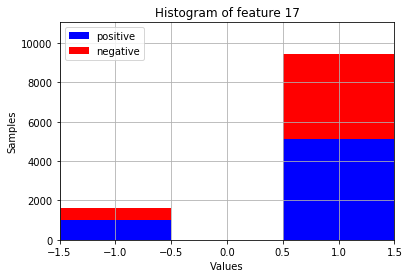
0.5836014123698684



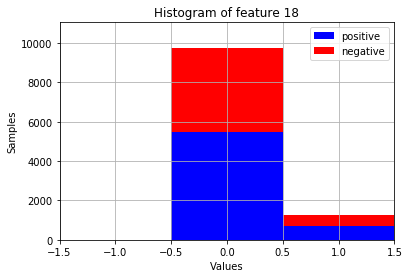
0.5762460588794359



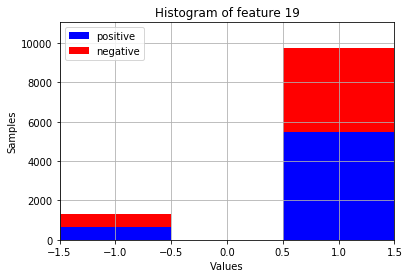
0.5959618133991337



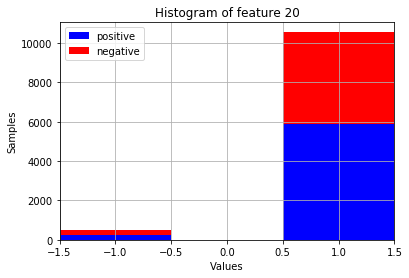
0.5025635851824467



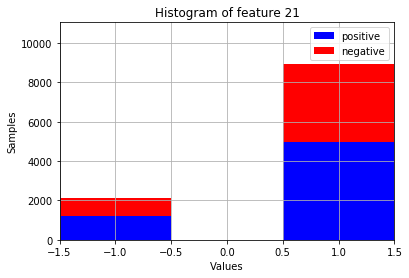
0.10230909512304441



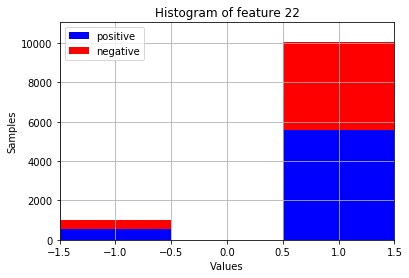
0.41920572704913855



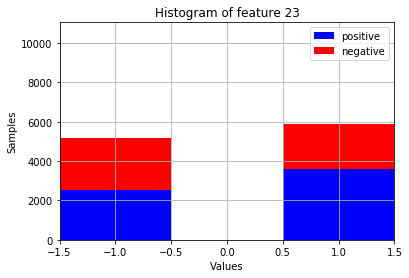
0.16481398770713482



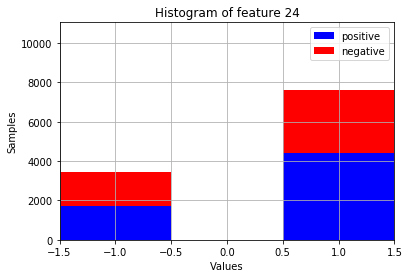
0.6237556430667694



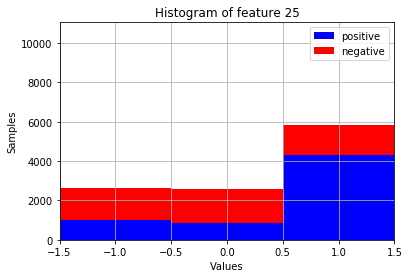
0.33264919185174907



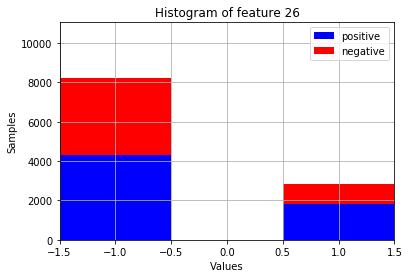
0.9962497532483495



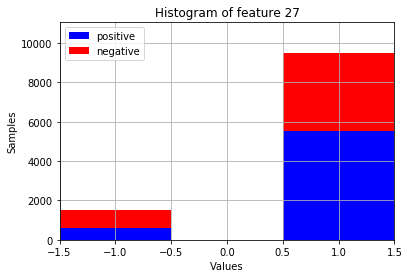
0.857784708299278



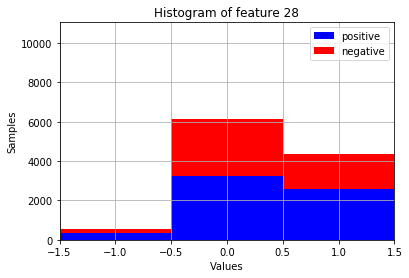
0.685080448667511



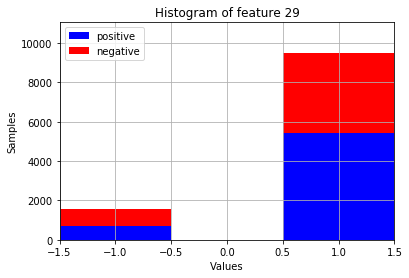
0.7660608678985417



0.47933103693336604



0.3248069180842203



0.48219901274829574

Accuratezza ottenuta con 9950 campioni per il training su 11055: 0.9085972850678733 e C=1

Calcolo accuratezza con 10-fold cross-validation e C=1...

[0.92495479 0.92676311 0.92857143 0.93218807 0.92766727 0.93851718

0.92585895 0.91221719 0.92663043 0.93025362]

In media: 0.9273622048201187 +/-(0.006292528176258127)

Calcolo accuratezza con 10-fold cross-validation e C variabile

Calcolo accuratezza per C=0.1

[0.92224231 0.92224231 0.92857143 0.93399638 0.92314647 0.93851718

0.92495479 0.91221719 0.92753623 0.92844203]

In media: 0.9261866341515651 +/-(0.0068018420218560515)

Calcolo accuratezza per C=1.0

[0.92495479 0.92676311 0.92857143 0.93218807 0.92766727 0.93851718

0.92585895 0.91221719 0.92663043 0.93025362]

In media: 0.9273622048201187 +/-(0.006292528176258127)

Calcolo accuratezza per C=10.0

[0.92495479 0.92676311 0.92857143 0.93218807 0.92766727 0.93851718

0.92585895 0.91221719 0.92844203 0.92844203]

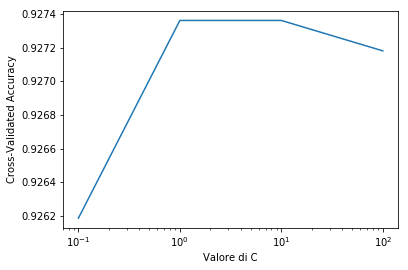
In media: 0.9273622048201187 +/-(0.006240155137318887)

Calcolo accuratezza per C=100.0

[0.92495479 0.92585895 0.92857143 0.93218807 0.92766727 0.93761302

0.92585895 0.91221719 0.92844203 0.92844203]

In media: 0.9271813729937174 +/-(0.006096023107881521)



Miglior risultato ottenuto con C=10.0 e accuratezza media=0.9273622048201187 +/-(0.006240155137318887)

Scelta del kernel e tuning dei parametri C e Gamma con GridSearchCV...

Modello: {'C': 0.01, 'kernel': 'linear'} accuracy: 0.923202170963365

Modello: {'C': 0.1, 'kernel': 'linear'} accuracy: 0.9261872455902307

Modello: {'C': 1.0, 'kernel': 'linear'} accuracy: 0.9273631840796019

Modello: {'C': 10.0, 'kernel': 'linear'} accuracy: 0.9273631840796019

Modello: {'C': 100.0, 'kernel': 'linear'} accuracy: 0.9271822704658526

Modello: {'C': 0.01, 'gamma': 1e-05, 'kernel': 'rbf'} accuracy: 0.5569425599276345

Modello: {'C': 0.01, 'gamma': 0.0001, 'kernel': 'rbf'} accuracy: 0.5569425599276345

Modello: {'C': 0.01, 'gamma': 0.001, 'kernel': 'rbf'} accuracy: 0.5569425599276345

Modello: {'C': 0.01, 'gamma': 0.01, 'kernel': 'rbf'} accuracy: 0.9076436001809136

Modello: {'C': 0.01, 'gamma': 0.1, 'kernel': 'rbf'} accuracy: 0.8257801899592945

Modello: {'C': 0.01, 'gamma': 1.0, 'kernel': 'rbf'} accuracy: 0.5569425599276345

Modello: {'C': 0.01, 'gamma': 10.0, 'kernel': 'rbf'} accuracy: 0.5569425599276345

Modello: {'C': 0.1, 'gamma': 1e-05, 'kernel': 'rbf'} accuracy: 0.5569425599276345

Modello: {'C': 0.1, 'gamma': 0.0001, 'kernel': 'rbf'} accuracy: 0.5569425599276345

Modello: {'C': 0.1, 'gamma': 0.001, 'kernel': 'rbf'} accuracy: 0.9060153776571687

Modello: {'C': 0.1, 'gamma': 0.01, 'kernel': 'rbf'} accuracy: 0.9204884667571235

Modello: {'C': 0.1, 'gamma': 0.1, 'kernel': 'rbf'} accuracy: 0.9348710990502035

Modello: {'C': 0.1, 'gamma': 1.0, 'kernel': 'rbf'} accuracy: 0.5984622342831298

Modello: {'C': 0.1, 'gamma': 10.0, 'kernel': 'rbf'} accuracy: 0.56318407960199

Modello: {'C': 1.0, 'gamma': 1e-05, 'kernel': 'rbf'} accuracy: 0.5569425599276345

Modello: {'C': 1.0, 'gamma': 0.0001, 'kernel': 'rbf'} accuracy: 0.9061058344640435

Modello: {'C': 1.0, 'gamma': 0.001, 'kernel': 'rbf'} accuracy: 0.9189507010402532

Modello: {'C': 1.0, 'gamma': 0.01, 'kernel': 'rbf'} accuracy: 0.9318860244233379

Modello: {'C': 1.0, 'gamma': 0.1, 'kernel': 'rbf'} accuracy: 0.961284486657621

Modello: {'C': 1.0, 'gamma': 1.0, 'kernel': 'rbf'} accuracy: 0.9216644052464948

Modello: {'C': 1.0, 'gamma': 10.0, 'kernel': 'rbf'} accuracy: 0.8510176390773405

Modello: {'C': 10.0, 'gamma': 1e-05, 'kernel': 'rbf'} accuracy: 0.9061962912709182

Modello: {'C': 10.0, 'gamma': 0.0001, 'kernel': 'rbf'} accuracy: 0.9184984170058796

Modello: {'C': 10.0, 'gamma': 0.001, 'kernel': 'rbf'} accuracy: 0.9265490728177296

Modello: {'C': 10.0, 'gamma': 0.01, 'kernel': 'rbf'} accuracy: 0.9450927182270465

Modello: {'C': 10.0, 'gamma': 0.1, 'kernel': 'rbf'} accuracy: 0.970872908186341

Modello: {'C': 10.0, 'gamma': 1.0, 'kernel': 'rbf'} accuracy: 0.9231117141564903

Modello: {'C': 10.0, 'gamma': 10.0, 'kernel': 'rbf'} accuracy: 0.8510176390773405

Modello: {'C': 100.0, 'gamma': 1e-05, 'kernel': 'rbf'} accuracy: 0.9184984170058796

Modello: {'C': 100.0, 'gamma': 0.0001, 'kernel': 'rbf'} accuracy: 0.9247399366802352

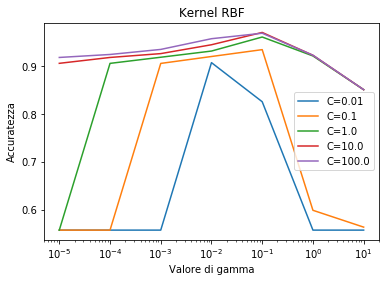
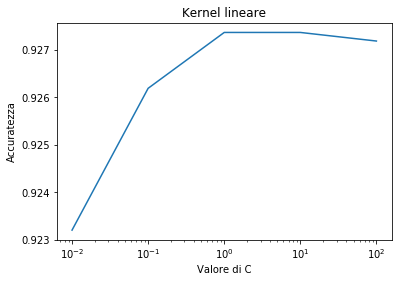
Modello: {'C': 100.0, 'gamma': 0.001, 'kernel': 'rbf'} accuracy: 0.9353233830845771

Modello: {'C': 100.0, 'gamma': 0.01, 'kernel': 'rbf'} accuracy: 0.957756671189507

Modello: {'C': 100.0, 'gamma': 0.1, 'kernel': 'rbf'} accuracy: 0.9692446856625961

Modello: {'C': 100.0, 'gamma': 1.0, 'kernel': 'rbf'} accuracy: 0.9231117141564903

Modello: {'C': 100.0, 'gamma': 10.0, 'kernel': 'rbf'} accuracy: 0.8510176390773405



Miglior tune: {'C': 10.0, 'gamma': 0.1, 'kernel': 'rbf'}

con media: 0.970872908186341 +/-( 0.009391939891934063 )

Modello completo:

SVC(C=10.0, cache\_size=200, class\_weight=None, coef0=0.0,

decision\_function\_shape='ovr', degree=3, gamma=0.1, kernel='rbf',

max\_iter=-1, probability=False, random\_state=None, shrinking=True,

tol=0.001, verbose=False)

Accuratezza del miglior modello su tutto il dataset: 0.9844414292175486

Elapsed time: 1104.8960473537445