

Dataset: bank-tr.csv

Experiment: exp_04

MLPClassifier(max_iter=5000, random_state=0)

MLP experiment best results:

Experiment best score (accuracy): 0.840602

MLP cross validation scores:

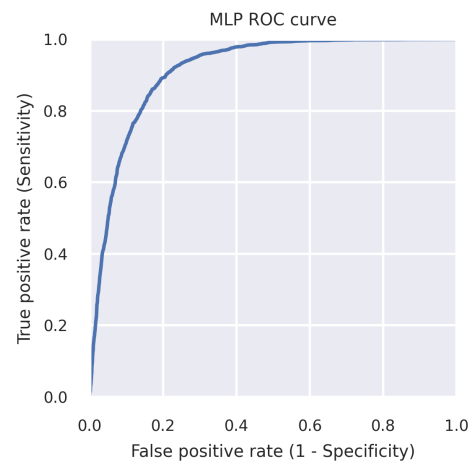
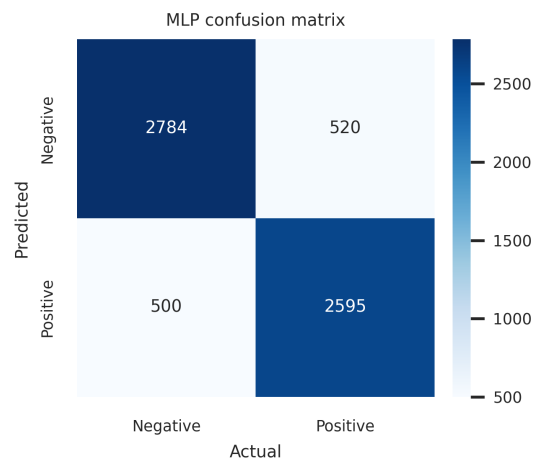
Accuracy: 0.840602

Precision: 0.833114

Recall: 0.838449

F1: 0.835700

AUC: 0.914562

MLP confusion matrix & ROC curve:**Best classifier:**

MLPClassifier(max_iter=5000, random_state=0)

Best hyperparameters:

activation: tanh

alpha: 0.05

hidden_layer_sizes: (10,)

learning_rate: constant

max_iter: 10000

solver: adam

Grid search hyperparameters:

hidden_layer_sizes: [(10,)]

activation: ['tanh']

solver: ['adam']

alpha: [0.05]

learning_rate: ['constant']

max_iter: [10000]

Dataset: bank-tr.csv

Experiment: exp_04

MLPClassifier(max_iter=5000, random_state=0)

Experiment parameters:

n_splits: 5

scoring: accuracy

target: made_deposit

categorical columns:

last_contact

cc_tr

last_contact_month

poutcome

feature selection:

accountID: False

town: False

country: False

age: False

job: False

married: False

education: False

defaulted?: False

current_balance: False

housing: False

has_loan: False

last_contact: True

cc_tr: True

last_contact_day: True

last_contact_month: True

last_contact_duration_s: True

campaign: True

days_since_last_contact: True

previous: True

poutcome: True

made_deposit: True

Dataset: bank-tr.csv

Experiment: exp_04

LogisticRegression(max_iter=1000, random_state=0)

LR experiment best results:

Experiment best score (accuracy): 0.810598

LR cross validation scores:

Accuracy: 0.810598

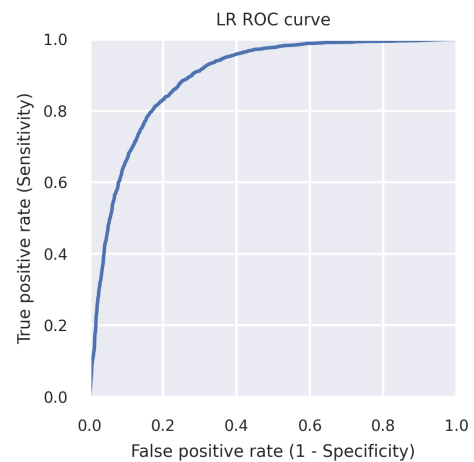
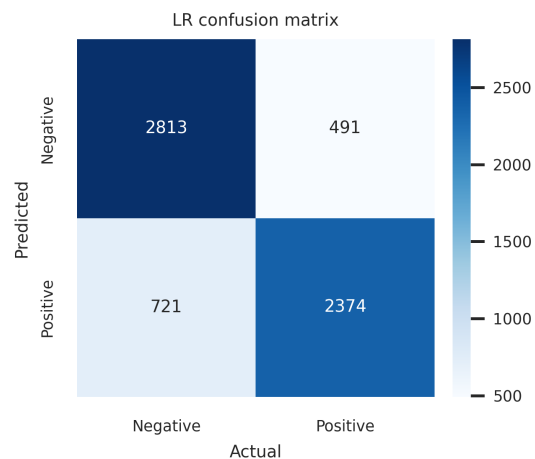
Precision: 0.828622

Recall: 0.767044

F1: 0.796552

AUC: 0.893755

LR confusion matrix & ROC curve:



Best classifier:

LogisticRegression(max_iter=1000, random_state=0)

Best hyperparameters:

C: 10

penalty: l1

solver: liblinear

Grid search hyperparameters:

penalty: ['l1']

C: [10]

solver: ['liblinear']

Dataset: bank-tr.csv

Experiment: exp_04

LogisticRegression(max_iter=1000, random_state=0)

Experiment parameters:

n_splits: 5
scoring: accuracy
target: made_deposit
categorical columns:
last_contact
cc_tr
last_contact_month
poutcome
feature selection:
accountID: False
town: False
country: False
age: False
job: False
married: False
education: False
defaulted?: False
current_balance: False
housing: False
has_loan: False
last_contact: True
cc_tr: True
last_contact_day: True
last_contact_month: True
last_contact_duration_s: True
campaign: True
days_since_last_contact: True
previous: True
poutcome: True
made_deposit: True