

Dataset: bank-tr.csv

Experiment: exp_01

DecisionTreeClassifier(random_state=0)

DT experiment best results:

Experiment best score (accuracy): 0.684798

DT cross validation scores:

Accuracy: 0.684798

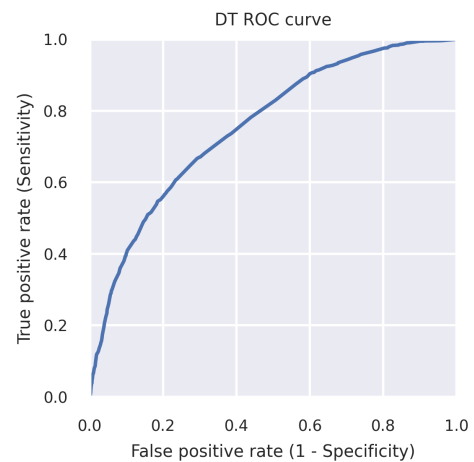
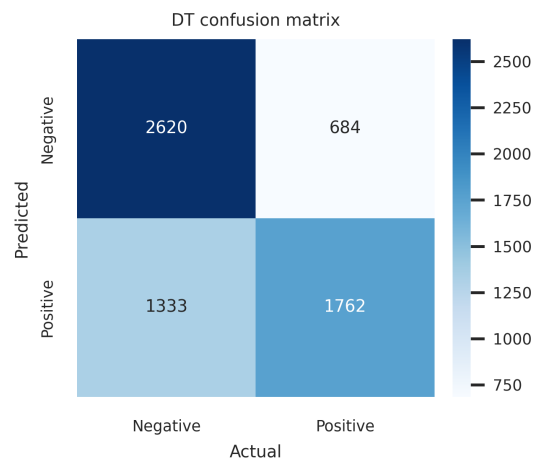
Precision: 0.723145

Recall: 0.569305

F1: 0.634849

AUC: 0.754097

DT confusion matrix & ROC curve:



Best classifier:

DecisionTreeClassifier(random_state=0)

Best hyperparameters:

ccp_alpha: 0.001

criterion: entropy

max_depth: 9

max_features: sqrt

Grid search hyperparameters:

ccp_alpha: [0.1, 0.01, 0.001]

criterion: ['gini', 'entropy']

max_depth: [5, 6, 7, 8, 9]

max_features: ['sqrt', 'log2']

Dataset: bank-tr.csv

Experiment: exp_01

DecisionTreeClassifier(random_state=0)

Experiment parameters:

n_splits: 5

scoring: accuracy

target: made_deposit

categorical columns:

town

country

job

married

education

defaulted?

housing

has_loan

last_contact

cc_tr

last_contact_month

poutcome

feature selection:

accountID: False

town: True

country: True

age: True

job: True

married: True

education: True

defaulted?: True

current_balance: True

housing: True

has_loan: True

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_01

LogisticRegression(max_iter=1000, random_state=0)

LR experiment best results:

Experiment best score (accuracy): 0.820598

LR cross validation scores:

Accuracy: 0.820598

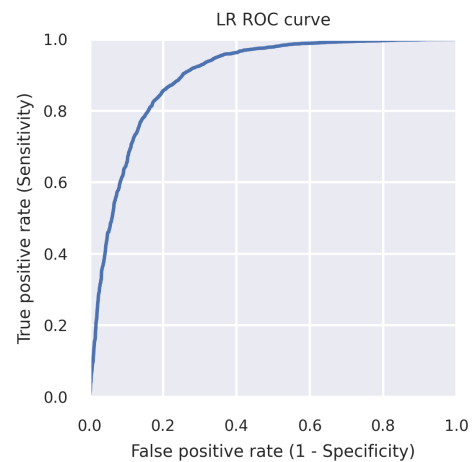
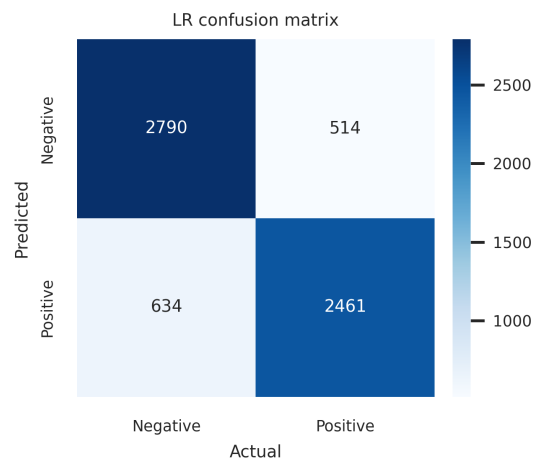
Precision: 0.827234

Recall: 0.795153

F1: 0.810819

AUC: 0.898059

LR confusion matrix & ROC curve:



Best classifier:

LogisticRegression(max_iter=1000, random_state=0)

Best hyperparameters:

C: 1.0

penalty: l1

solver: saga

Grid search hyperparameters:

penalty: ['l1', 'l2']

C: [1.0, 0.1, 10]

solver: ['liblinear', 'saga']

Dataset: bank-tr.csv

Experiment: exp_01

LogisticRegression(max_iter=1000, random_state=0)

Experiment parameters:

n_splits: 5
scoring: accuracy
target: made_deposit
categorical columns:
town
country
job
married
education
defaulted?
housing
has_loan
last_contact
cc_tr
last_contact_month
poutcome

feature selection:

accountID: False
town: True
country: True
age: True
job: True
married: True
education: True
defaulted?: True
current_balance: True
housing: True
has_loan: True
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