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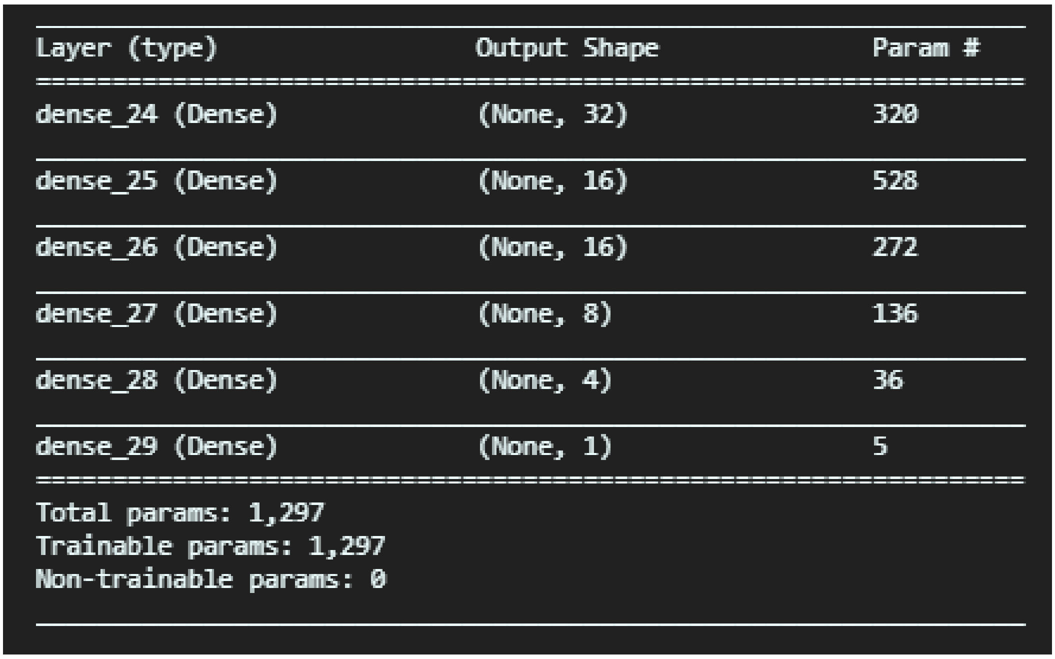
Lampiran

#Jumlah parameter pada Artificial Neural Network.



```
Layer (type)                 Output Shape              Param #
=================================================================
dense_24 (Dense)             (None, 32)                320

dense_25 (Dense)             (None, 16)                528

dense_26 (Dense)             (None, 16)                272

dense_27 (Dense)             (None, 8)                 136

dense_28 (Dense)             (None, 4)                 36

dense_29 (Dense)             (None, 1)                 5
=================================================================
Total params: 1,297
Trainable params: 1,297
Non-trainable params: 0
```

#parameter pada Regresi Linear Berganda.

Cross Validation 1

$Y = -33433 - 90598.6X_1 + 135031.7X_2 + 481580.4X_3 + 53613.29X_4 + 79232.77X_5 + 504650.3X_6 + 320390.2X_7 - 18894.2X_8 + 277963.6X_9$

Cross Validation 2

$Y = -335035 - 97540.1X_1 + 144818.8X_2 + 489454.7X_3 + 51743.05X_4 + 82199.52X_5 + 504496.7X_6 + 319590.6X_7 - 20882.6X_8 + 280029.7X_9$

Cross Validation 3

$Y = -334333 - 93628.5X_1 + 144192.4X_2 + 481580.4X_3 + 57320.19X_4 + 78432.45X_5 + 503873.8X_6 + 316483X_7 - 14915.6X_8 + 278802.9X_9$

Cross Validation 4

$Y = -339001 - 90897.9X_1 + 145224.2X_2 + 483661.9X_3 + 50909.02X_4 + 82761.6X_5 + 510008.3X_6 + 316798.9X_7 - 18269.2X_8 + 282238.4X_9$

lidation 5

8082-97010.9$X_1 + 145692.3X_2 + 484907.8X_3 + 52282.35X_4 +$

$1X_5 + 505611.1X_6 + 317669.4X_7 - 15004.5X_8 + 281963.1X_9$

#parameter pada Regresi Polinomial.

Cross Validation 1

$Y = -82219.6 - 217603X_1 - 57753.25X_2 + 160825.5X_3 + 8877.515X_4 +$
$60531.1X_5 - 254544X_6 + 848379.5X_7 + 310432.7X_8 -$
$290595X_9 + 95505.82X_1{}^2 - 139451X_1X_2 - 221386X_1X_3 + 118810.7X_1X_4 -$
$93422.4X_1X_5 + 201937.6X_1X_6 - 53082.6X_1X_7 + 234533X_1X_8 +$
$177898.4X_1X_9 - 27680.2X_2{}^2 + 414679.9X_2X_3 - 204855X_2X_4 -$
$136529X_2X_5 + 139790.5X_2X_6 + 71173.96X_2X_7 - 28776.2X_2X_8 -$
$42716.9X_2X_9 - 329487X_3{}^2 + 239250.2X_3X_4 + 281000.3X_3X_5 +$
$413902.1X_3X_6 + 336910.9X_3X_7 - 224270X_3X_8 - 75731.3X_3X_9 +$
$33181.58X_4{}^2 + 58910.3X_4X_5 - 50902.1X_4X_6 + 55989.35X_4X_7 -$
$184752X_4X_8 - 91144.6X_4X_9 - 32965.5X_5{}^2 + 84211.67X_5X_6 -$
$24699.7X_5X_7 + 60995.86X_5X_8 + 20980.29X_5X_9 + 183640.4X_6{}^2 +$
$363185.9X_6X_7 - 452668X_6X_8 + 337647X_6X_9 - 669596X_7{}^2 -$
$266880X_7X_8 - 320706X_7X_9 + 120737.2X_8{}^2 - 169863X_8X_9 + 146666.7X_9{}^2$

Cross Validation 2

$Y = -72587 - 193624X_1 - 65821.8X_2 + 185744.7X_3 + 73698.67X_4 +$
$101491.6X_5 - 305233X_6 + 861044X_7 + 317354.8X_8 - 288972X_9 +$
$70425.52X_1{}^2 - 108037X_1X_2 - 202692X_1X_3 + 135293.8X_1X_4 -$
$77842.5X_1X_5 + 173109.3X_1X_6 - 56500.5X_1X_7 + 166746.1X_1X_8 +$
$138627.1X_1X_9 + 38366.27X_2{}^2 + 298847.7X_2X_3 - 187368X_2X_4 -$
$169502X_2X_5 + 169502X_2X_6 + 55264.39X_2X_7 + 53849.16X_2X_8 +$
$45248.11X_2X_9 - 337512X_3{}^2 + 157377.7X_3X_4 + 307397.2X_3X_5 +$
$474628X_3X_6 + 342114.6X_3X_7 - 216442X_3X_8 - 118786X_3X_9 +$
$40116.1X_4{}^2 + 23116.18X_4X_5 - 108563X_4X_6 + 31121.31X_4X_7 -$
$181776X_4X_8 - 71057X_4X_9 - 57590.7X_5{}^2 + 66653.28X_5X_6 -$
$15699.2X_5X_7 + 64278.05X_5X_8 + 13468.32X_5X_9 + 188262.9X_6{}^2 +$
[illegible] $X_6X_7 - 471576X_6X_8 + 362582.2X_6X_9 - 697921X_7{}^2 -$
[illegible] $X_7X_8 + 288445.9X_7X_9 + 122946.5X_8{}^2 - 184299X_8X_9 + 154361X_9{}^2$

Cross Validation 3

$Y = -35437.5 - 205578X_1 - 88779.6X_2 + 21718.9X_3 - 5819.99X_4 +$
$96531.14X_5 - 273747X_6 + 827264.7X_7 + 272727.1X_8 -$
$364184X_9 + 70425.52{X_1}^2 - 15059.5X_1X_2 - 254952X_1X_3 + 128641.9X_1X_4 -$
$84939.2X_1X_5 + 147045.2X_1X_6 - 52848.1X_1X_7 + 209541X_1X_8 +$
$171252.3X_1X_9 + 17923.19{X_2}^2 + 300808.4X_2X_3 - 166295X_2X_4 -$
$155717X_2X_5 + 231940.7X_2X_6 + 65241.48X_2X_7 + 21861.85X_2X_8 +$
$35396.1X_2X_9 - 302282{X_3}^2 + 190845X_3X_4 + 282904.8X_3X_5 +$
$445041.4X_3X_6 + 342114.6X_3X_7 - 228812X_3X_8 - 138702X_3X_9 +$
$43178.4{X_4}^2 + 62511.47X_4X_5 - 83139.1X_4X_6 + 56947.78X_4X_7 -$
$144668X_4X_8 - 72181.2X_4X_9 - 49678.4{X_5}^2 + 31184.96X_5X_6 -$
$9026.18X_5X_7 + 80755.26X_5X_8 + 13975.62X_5X_9 + 188225.1{X_6}^2 +$
$350788.9X_6X_7 - 450173X_6X_8 + 385104.3X_6X_9 - 687393{X_7}^2 -$
$247520X_7X_8 + 319118.4X_7X_9 + 100648.5{X_8}^2 - 136082X_8X_9 + 174031.9{X_9}^2$

Cross Validation 4

$Y = -83151.6 - 201168X_1 - 42807.8X_2 + 102215X_3 + 21680.7X_4 +$
$152384.8X_5 - 267828X_6 + 894231X_7 + 343858.7X_8 -$
$332766X_9 + 70368.98{X_1}^2 + 11649.75X_1X_2 - 257457X_1X_3 + 114508.5X_1X_4 -$
$117290X_1X_5 + 19009.75X_1X_6 - 383481.1X_1X_7 + 159042.5X_1X_8 +$
$154719X_1X_9 - 30182.3{X_2}^2 + 422611.9X_2X_3 - 145927X_2X_4 -$
$205957X_2X_5 + 196365.3X_2X_6 + 13985.61X_2X_7 + 67872.47X_2X_8 +$
$34158.36X_2X_9 - 363841{X_3}^2 + 143967.7X_3X_4 + 349624X_3X_5 +$
$537373.4X_3X_6 + 332353.9X_3X_7 - 172457X_3X_8 - 69609.6X_3X_9 +$
$58347.61{X_4}^2 + 22042.13X_4X_5 - 103443X_4X_6 + 42980.22X_4X_7 -$
$153262X_4X_8 - 42046.7X_4X_9 - 62247.3{X_5}^2 + 83305.64X_5X_6 -$
$26007.2X_5X_7 + 19883.56X_5X_8 - 1275.81X_5X_9 + 171808.5{X_6}^2 +$
$371955.6X_6X_7 - 519774X_6X_8 + 305596.3X_6X_9 - 731098{X_7}^2 -$
$X_7X_8 + 325508.3X_7X_9 + 67188.8{X_8}^2 - 152178X_8X_9 + 166521.7{X_9}^2$

Cross Validation 5

$$\begin{aligned}
&\mathrm{Y} = -70427.8 - 211726X_1 -31607.9X_2 +93873.61X_3 + 1190857X_4 + \\
&95815.22X_5 - 242813X_6 + 870801.7X_7 +327520.2X_8 - \\
&315464X_9 +78631.87{X_1}^2 +5833.197X_1X_2 - 218817X_1X_3 + 83763.35X_1X_4 - \\
&94747.3X_1X_5 + 137987X_1X_6 - 58647.3X_1X_7 + 196621X_1X_8 + \\
&159373X_1X_9 - 46439.1{X_2}^2 + 379675X_2X_3 - 170347X_2X_4 - 103431X_2X_5 + \\
&238747.6X_2X_6 + 32977.67X_2X_7 + 3559.139X_2X_8 - 326661.1X_2X_9 - \\
&300335{X_3}^2 + 184813.8X_3X_4 + 289137.6X_3X_5 + 453848.3X_3X_6 + \\
&390812.1X_3X_7 - 224663X_3X_8 - 55232X_3X_9 + 53013.23{X_4}^2 + \\
&57943.68X_4X_5 - 100239X_4X_6 + 553137.59X_4X_7 - 129164X_4X_8 - \\
&58916.6X_4X_9 - 57348.6{X_5}^2 + 83125.32X_5X_6 - 34868.6X_5X_7 + \\
&37718.91X_5X_8 + 17120.08X_5X_9 + 165285.4{X_6}^2 + 338174.7X_6X_7 - \\
&453503X_6X_8 + 338216.8X_6X_9 - 702830{X_7}^2 - 274718X_7X_8 + \\
&321850.5X_7X_9 + 102393.2{X_8}^2 - 145439X_8X_9 + 155843.2{X_9}^2
\end{aligned}$$

```
#Library yang digunakan

import numpy as np

import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns
from sklearn import linear_model
from sklearn import metrics
from sklearn.feature_selection import RFE
from sklearn.preprocessing import PolynomialFeatures, MinMaxScaler
from sklearn.ensemble import RandomForestRegressor
from sklearn.model_selection import KFold
import tensorflow
from tensorflow.keras.models import Sequential
from tensorflow.keras.layers import Dense
from tensorflow.keras.wrappers.scikit_learn import KerasRegressor
from tensorflow.keras import backend as K
from tensorflow.keras.optimizers import Adam
import statsmodels.api as sm
from scipy import stats

seed=10
tensorflow.random.set_seed(seed)

#membaca data
df = pd.read_csv('kc_house_data.csv', header=0)

#menampilkan data
df.head()

#menampilkan info data
df.info()

#menghapus variabel
df = df.drop(['id'], axis=1)

#menampilkan distribusi data
df1=df[['price', 'bedrooms', 'bathrooms', 'sqft_living', 'zipcode',
'sqft_lot', 'floors', 'waterfront', 'view', 'condition', 'grade', 'lat
', 'long',
    'sqft_above', 'sqft_basement', 'yr_built', 'yr_renovated', 'sqft_l
iving15', 'sqft_lot15']]
h = df1.hist(bins=25,figsize=(16,16),xlabelsize='10',ylabelsize='10',x
rot=-15)
sns.despine(left=True, bottom=True)
[x.title.set_size(12) for x in h.ravel()];
[x.yaxis.tick_left() for x in h.ravel()];

#menambahkan variabel umur rumah dan umur renovasi rumah
df['sales_yr']=df['date'].astype(str).str[:4]
df['age']=df['sales_yr'].astype(int)-df['yr_built']

df['age_rnv']=0
df['age_rnv']=df['sales_yr'][df['yr_renovated']!=0].astype(int)-
df['yr_renovated'][df['yr_renovated']!=0]
df['age_rnv'][df['age_rnv'].isnull()]=0


bins = [-2,0,5,10,25,50,75,100,100000]
labels = ['<1','1-5','6-10','11-25','26-50','51-75','76-100','>100']
df['age_binned'] = pd.cut(df['age'], bins=bins, labels=labels)

bins = [-2,0,5,10,25,50,75,100000]
labels = ['<1','1-5','6-10','11-25','26-50','51-75','>75']
df['age_rnv_binned'] = pd.cut(df['age_rnv'], bins=bins, labels=labels)
df['sales_yr']=df['date'].astype(str).str[:4]

#menampilkan histogram umur rumah dan umur renovasi rumah
f, axes = plt.subplots(1, 2,figsize=(15,5))
p1=sns.countplot(df['age_binned'],ax=axes[0])
for p in p1.patches:
    height = p.get_height()
    p1.text(p.get_x()+p.get_width()/2,height + 50,height,ha="center")

p2=sns.countplot(df['age_rnv_binned'],ax=axes[1])
sns.despine(left=True, bottom=True)
for p in p2.patches:
    height = p.get_height()
    p2.text(p.get_x()+p.get_width()/2,height + 200,height,ha="center")

      ].set(xlabel='Age')
      ].yaxis.tick_left()
      ].yaxis.set_label_position("right")
```

```
axes[1].yaxis.tick_right()
axes[1].set(xlabel='Renovation Age')


#menampilkan variabel yang memiliki data nol.
print('zero values (in percent)')
for col in df:
    print(col,': ', (df[col]==0).sum()/len(df.index))

#menghapus variabel
df = df.drop(['waterfront','view','age_rnv'],axis=1)

#menampilkan uji f dan uji t
regressor_OLS = sm.OLS(df['price'], df.drop(['price'],axis=1)).fit()
regressor_OLS.summary()

#eliminasi variabel

y = df['price']
X = df.drop(['price'],axis=1)
colnames = X.columns
ranks = {}
def ranking(ranks, names, order=1):
    minmax = MinMaxScaler()
    ranks = minmax.fit_transform(order*np.array([ranks]).T).T[0]
    ranks = map(lambda x: round(x,2), ranks)
    return dict(zip(names, ranks))

lr = linear_model.LinearRegression(normalize=True,)
lr.fit(X,y)

rfe = RFE(lr, n_features_to_select=1, verbose=3)
rfe.fit(X,y)

lr = linear_model.LinearRegression(normalize=True)
lr.fit(X,y)


ridge = linear_model.Ridge(alpha = 7)
ridge.fit(X,y)

ranks['LR'] = ranking(np.abs(lr.coef_), colnames)
      'Ridge'] = ranking(np.abs(ridge.coef_), colnames)
      'RFE"] = ranking(list(map(float, rfe.ranking_)), colnames, order
#menampilkan hasil dari eliminasi variabel
r = {}
for name in colnames:
    r[name] = round(np.mean([ranks[method][name] for method in ranks.k
eys()]), 2)

meanplot = pd.DataFrame(list(r.items()), columns= ['Feature','Mean Ran
king'])

meanplot = meanplot.sort_values('Mean Ranking', ascending=False)

sns.factorplot(x="Mean Ranking", y="Feature", data = meanplot, kind="b
ar",
               size=14, aspect=1.9, palette='coolwarm')

#menghapus variabel dari hasil eliminasi variabel
df = df.drop(['sqft_lot', 'sqft_lot15', 'sqft_basement', 'sqft_living1
5', 'sqft_above','zipcode'], axis=1)



#minmaxscaler
minmax = MinMaxScaler(feature_range=(0.0, 1))
colnames = X.columns
X = minmax.fit_transform(X)
X = pd.DataFrame(X,columns=colnames)

#menampilkan hasil minmaxscaler
X.head()

#membuat model

#membuat model untuk menampilkan nilai r2 dan error pada ANN
def coeff_determination(y_true, y_pred):
    SS_res =  K.sum(K.square( y_true-y_pred ))
    SS_tot = K.sum(K.square( y_true - K.mean(y_true)))
    return ( 1 - SS_res/(SS_tot + K.epsilon()))

#membuat model hidden layer pada ANN
def baseline_model():
    model = Sequential()
    model.add(Dense(32, input_shape = (len(X.columns),), activation='r
elu'))
      del.add(Dense(16, activation='relu'))
      del.add(Dense(16, activation='relu'))
      del.add(Dense(8, activation='relu'))
      del.add(Dense(4, activation='relu'))
      del.add(Dense(1, activation='linear'))
    model.compile(loss='mse', optimizer=Adam(learning_rate=0.01), metr
ics=[coeff_determination])
    return model

#menampilkan jumlah parameter ANN
mlp.summary()

#menambahkan jumlah epoch dan batch size
EPOCHS = 500
BATCH_SIZE = 64

#menentukan Cross Validation sebanyak 5 kali.
kf = KFold(n_splits=5, shuffle=True, random_state=seed)
r2_cv = []
mse_cv = []

r2_cv_train = []
mse_cv_train = []

mlp_history = []
i=1

#iterasi cross validation
for train_index, test_index in kf.split(X):
    print('Cross Validation {}'.format(i))
    r2 = []
    mse = []
    r2_train = []
    mse_train = []

    X_train, X_test = X.iloc[train_index], X.iloc[test_index]
    y_train, y_test = y[train_index], y[test_index]


    #membuat model regresi linear berganda
    lr = linear_model.LinearRegression().fit(X_train, y_train)
    #training score
    lr_y_pred = lr.predict(X_train)
    r2_train += [float(format(metrics.r2_score(y_train,lr_y_pred),'.
3f'))]
    mse_train += [float(format((metrics.mean_squared_error(y_train,lr_
y_pred)),'.3f'))]
         esting score
         _y_pred = lr.predict(X_test)
          += [float(format(metrics.r2_score(y_test,lr_y_pred),'.3f'))]
         e += [float(format((metrics.mean_squared_error(y_test,lr_y_pred)
         '))]
```

```
   # Membuat model regresi polinomial derajat 2
    poly2 = PolynomialFeatures(degree=2)
    Xpoly2 = poly2.fit_transform(X_train)
    poly2_lr = linear_model.LinearRegression().fit(Xpoly2, y_train)
    #training score
    poly2_y_pred = poly2_lr.predict(poly2.transform(X_train))
    r2_train += [float(format(metrics.r2_score(y_train,poly2_y_pred),'
.3f'))]
    mse_train += [float(format((metrics.mean_squared_error(y_train,pol
y2_y_pred)),'.3f'))]
    #testing score
    poly2_y_pred = poly2_lr.predict(poly2.transform(X_test))
    r2 += [float(format(metrics.r2_score(y_test,poly2_y_pred),'.3f'))]
    mse += [float(format((metrics.mean_squared_error(y_test,poly2_y_pr
ed)),'.3f'))]

    #Membuat model Articial Neural Network
    mlp = baseline_model()
    mlp_history += [mlp.fit(X_train,y_train, epochs=EPOCHS, batch_size
=BATCH_SIZE, verbose=2)]
    #mlp_history += [mlp.fit(X_train,y_train, epochs=EPOCHS, batch_siz
e=BATCH_SIZE, verbose=2).history['coeff_determination']]
    #training score
    mlp_y_pred = mlp.predict(X_train)
    r2_train += [float(format(metrics.r2_score(y_train,mlp_y_pred),'.3
f'))]
    mse_train += [float(format((metrics.mean_squared_error(y_train,mlp
_y_pred)),'.3f'))]
    #testing score
    mlp_y_pred = mlp.predict(X_test)
    r2 += [float(format(metrics.r2_score(y_test,mlp_y_pred),'.3f'))]
    mse += [float(format((metrics.mean_squared_error(y_test,mlp_y_pred
)),'.3f'))]

    r2_cv += [r2]
    mse_cv += [mse]
r2_cv_train += [r2_train]
    mse_cv_train += [mse_train]
    i +=1
mlp_history_loss = []
mlp_history_r2 = []
for i in range(len(mlp_history)):
      p_history_loss += [mlp_history[i].history['loss']]
      p_history_r2 += [mlp_history[i].history['coeff_determination']]
```

```
#menampilkan parameter rlb
pd.DataFrame(lr_coef_cv).T

#menampilkan parameter rp
pd.DataFrame(poly2_coef_cv).T

#Menampilkan jumlah parameter ANN
mlp = baseline_model()
mlp.summary()

#menyimpan hasil training yang digunakan untuk memprediksi data baru
lr_filename = "lr.save"
joblib.dump(lr, lr_filename)
poly2_filename = "poly2.save"
joblib.dump(poly2_lr, poly2_filename)
mlp_filename = "mlp.save"
mlp.save_weights(mlp_filename)

#menampilkan plot nilai error dari ANN
f, ax = plt.subplots()

ax.fill_between(range(1, EPOCHS+1), np.max(mlp_history_loss, axis=0),
np.min(mlp_history_loss,axis=0) , alpha=0.25, color="#00aaff")
ax.plot(range(1, EPOCHS+1), np.average(mlp_history_loss, axis=0), colo
r="#00aaff", label="Training Loss")
plt.ylabel('R-Squared')
plt.xlabel('epoch')
ax.legend()
ax.grid(True)

#Menampilkan plot nilai R2 dari ANN
f, ax = plt.subplots()

ax.fill_between(range(1, EPOCHS+1), np.max(mlp_history_r2, axis=0), np
.min(mlp_history_r2,axis=0) , alpha=0.25, color="#00aaff")

ax.plot(range(1, EPOCHS+1), np.average(mlp_history_r2, axis=0), color=
"#00aaff", label="Training R-Squared")
plt.ylabel('R-Squared')
plt.xlabel('epoch')
ax.legend()
ax.grid(True)

      ilkan hasil 5 kali cross validation nilai R2
      ing result
      sors = ['lr', 'poly2', 'mlp']
      nes = [1,2,3,4,5]
```

```
r2_cv_train = pd.DataFrame(r2_cv_train, columns=regressors)
r2_cv_train.index = row_names
r2_cv_train.index.name = 'cv'
r2_avg_train = np.average(r2_cv_train, axis=0)
r2_cv_train

# testing result
regressors = ['lr', 'poly2', 'mlp']
row_names = [1,2,3,4,5]
r2_cv = pd.DataFrame(r2_cv, columns=regressors)
r2_cv.index = row_names
r2_cv.index.name = 'cv'
r2_avg = np.average(r2_cv, axis=0)
r2_cv
#menampilkan hasil 5 kali cross validation nilai error

#training result
row_names = [1,2,3,4,5]
mse_cv_train = pd.DataFrame(mse_cv_train, columns=regressors)
mse_cv_train.index = row_names
mse_cv_train.index.name = 'cv'
mse_avg_train = np.average(mse_cv_train, axis=0)
mse_cv_train
#menampilkan RMSE
np.sqrt(mse_cv_train)
#testing result
row_names = [1,2,3,4,5]
mse_cv = pd.DataFrame(mse_cv, columns=regressors)
mse_cv.index = row_names
mse_cv.index.name = 'cv'
mse_avg = np.average(mse_cv, axis=0)
mse_cv
#Menampilkan RMSE
np.sqrt(mse_cv)

#merata-ratakan hasil 5 kali cross validation dari nilai R2 dan nilai
Error
#training
result_train = pd.DataFrame([r2_avg_train]+[np.sqrt(mse_avg_train)]).T
result_train.columns=['R2', 'RMSE']
result_train.index = regressors
result_train.index.name = 'regressor'
      _train
      ng
       = pd.DataFrame([r2_avg]+[np.sqrt(mse_avg)]).T
      .columns=['R2', 'RMSE']
```

```
result.index = regressors
result.index.name = 'regressor'
result
#memprediksi harga rumah dengan data baru

mlp_filename = "mlp.save"
poly2_filename = "poly2.save"
lr_filename = "lr.save"

mlp = baseline_model()
mlp.load_weights(mlp_filename)

lr = joblib.load(lr_filename)
poly2 = PolynomialFeatures(degree=2)
poly2_lr = joblib.load(poly2_filename)


#menampilkan data baru
data_baru = pd.read_excel('data_baru.xlsx')
colnames = data_baru.columns
data_baru

#minmaxscaler data baru
scaler_filename = "scaler.save"
minmax = MinMaxScaler()
minmax = joblib.load(scaler_filename)
data_baru = minmax.transform(data_baru)

#memprediksi harga jual rumah pada data baru
lr_pred = lr.predict(data_baru)
lr_pred

poly2_pred = poly2_lr.predict(poly2.fit_transform(data_baru))
poly2_pred


mlp_pred = mlp.predict(data_baru)
mlp_pred
```