SVR MODEL AND KNN MODEL

```python
import numpy as np

import pandas as pd

import matplotlib.pyplot as plt


dataset = pd.read_csv(r'D:\Samsom - All Data\Naresh IT Institute\New folder\emp_sal.csv')


x = dataset.iloc[:, 1:2].values

y = dataset.iloc[:, 2].values


from sklearn.linear_model import LinearRegression

lin_reg = LinearRegression()

lin_reg.fit(x, y)


plt.scatter(x, y, color = 'red')

plt.plot(x, lin_reg.predict(x), color = 'blue')

plt.title('linear regression model (Linear Regression)')

plt.xlabel('Position level')

plt.ylabel('Salary')

plt.show()


lin_model_pred = lin_reg.predict([[6.5]])

lin_model_pred


# non linear model
```

```python
from sklearn.preprocessing import PolynomialFeatures

poly_reg = PolynomialFeatures(degree = 6)

x_poly = poly_reg.fit_transform(x)


poly_reg.fit(x_poly, y)

lin_reg_2 = LinearRegression()

lin_reg_2.fit(x_poly, y)


#1st model lin_reg_2 (linear model)

#2nd model poly_reg (polynomali model)


plt.scatter(x, y, color = 'red')

plt.plot(x, lin_reg_2.predict(poly_reg.fit_transform(x)))

plt.title('polymodel (Polynomial Regression)')

plt.xlabel('Position level')

plt.ylabel('Salary')

plt.show()


poly_model_pred = lin_reg_2.predict(poly_reg.fit_transform([[6.5]]))

poly_model_pred


# SVR model

from sklearn.svm import SVR

svr_model = SVR(kernel="poly", degree=5)

svr_model.fit(x, y)


svr_model_pred = svr_model.predict([[6.5]])

svr_model_pred
```

```python
# KNN model

from sklearn.neighbors import KNeighborsRegressor

knn_model = KNeighborsRegressor(n_neighbors=3, weights="uniform",p=2)

knn_model.fit(x,y)


knn_model_pred = knn_model.predict([[6.5]])

print(knn_model_pred)
```