

```

In [3]: import numpy as np
import matplotlib.pyplot as plt
import pandas as pd

dataset = pd.read_csv(r"C:\Users\soham\OneDrive\Desktop\OCT 02\1.POLYNOMIAL RE

X = dataset.iloc[:, 1:2].values
y = dataset.iloc[:, 2].values

# linear model -- linear algor ( degree - 1)
from sklearn.linear_model import LinearRegression
lin_reg = LinearRegression(degree=5)
lin_reg.fit(X, y)

# polynomial model ( bydefeaut degree - 2)
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)

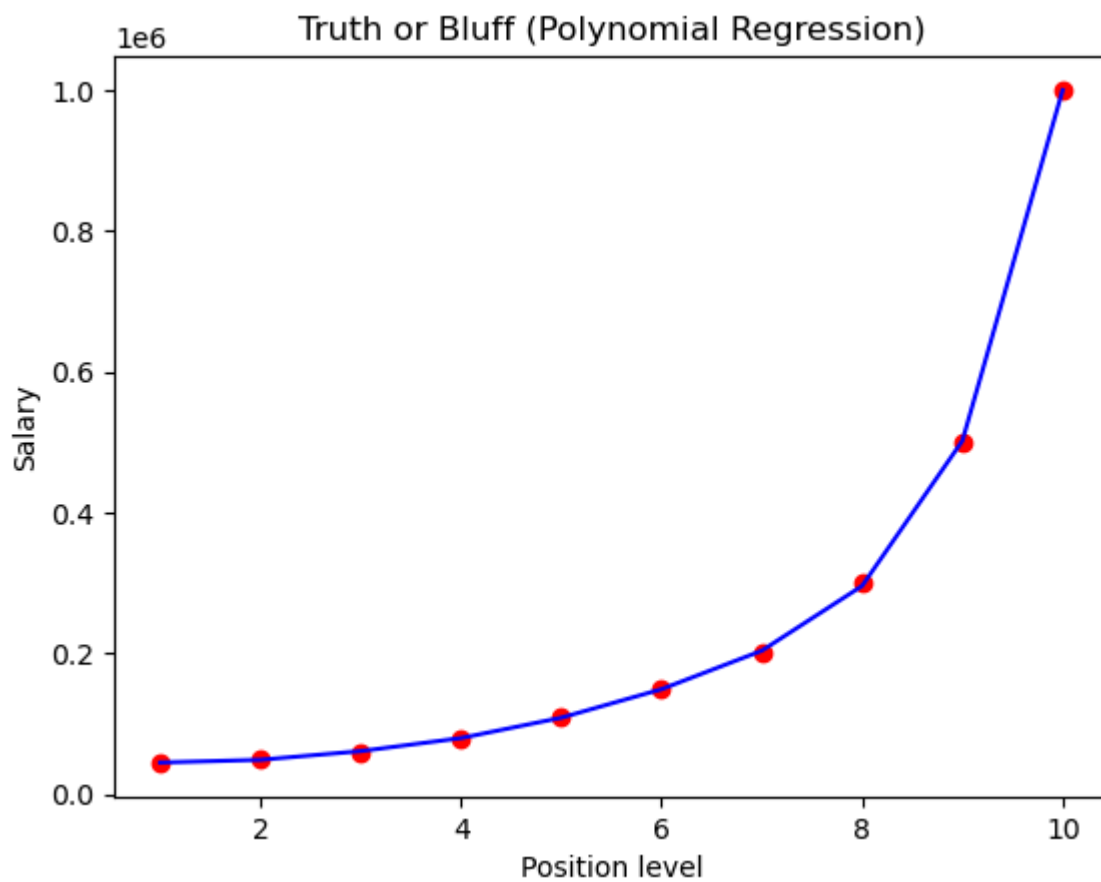
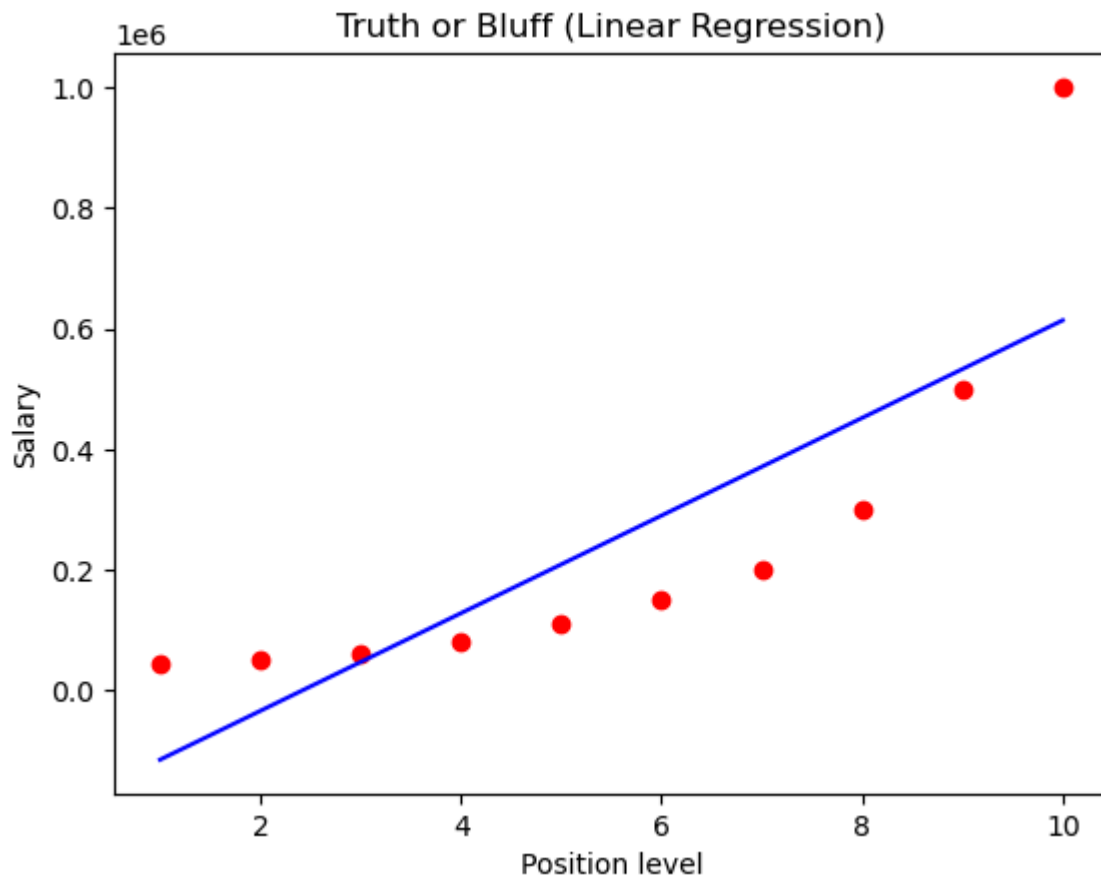
# linear regression visualizaton
plt.scatter(X, y, color = 'red')
plt.plot(X, lin_reg.predict(X), color = 'blue')
plt.title('Truth or Bluff (Linear Regression)')
plt.xlabel('Position level')
plt.ylabel('Salary')
plt.show()

# poly nomial visualization
plt.scatter(X, y, color = 'red')
plt.plot(X, lin_reg_2.predict(poly_reg.fit_transform(X)), color = 'blue')
plt.title('Truth or Bluff (Polynomial Regression)')
plt.xlabel('Position level')
plt.ylabel('Salary')
plt.show()

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

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

```



Out[3]: array([174192.81930584])

```
In [11]: import numpy as np
import matplotlib.pyplot as plt
import pandas as pd
```

```

dataset = pd.read_csv(r"C:\Users\soham\OneDrive\Desktop\OCT 02\1.POLYNOMIAL RE

X = dataset.iloc[:, 1:2].values
y = dataset.iloc[:, 2].values

# linear model -- linear algor ( degree - 1)
from sklearn.linear_model import LinearRegression
lin_reg = LinearRegression()
lin_reg.fit(X, y)

# polynomial model ( bydefeaut degree - 2)
from sklearn.preprocessing import PolynomialFeatures
poly_reg = PolynomialFeatures(degree=1)
X_poly = poly_reg.fit_transform(X)

poly_reg.fit(X_poly, y)
lin_reg_2 = LinearRegression()
lin_reg_2.fit(X_poly, y)

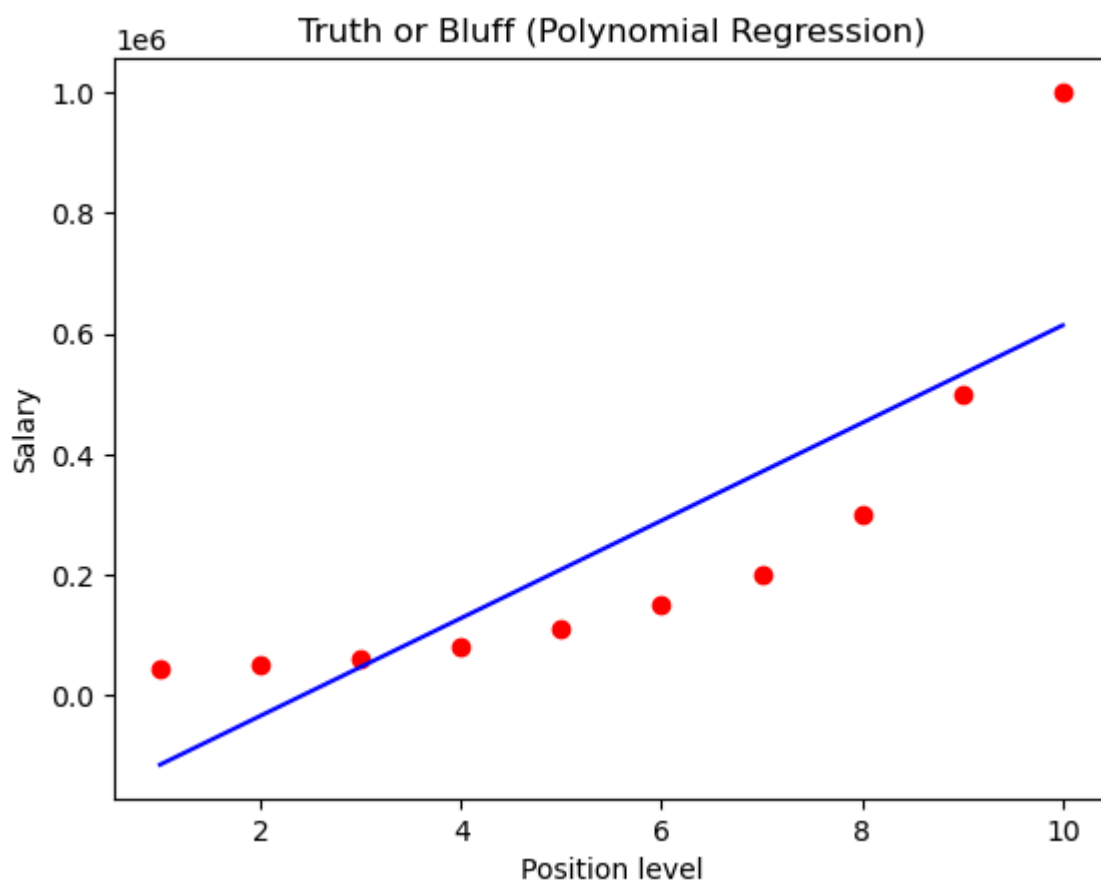
# linear regression visualizaton
plt.scatter(X, y, color = 'red')
plt.plot(X, lin_reg.predict(X), color = 'blue')
plt.title('Truth or Bluff (Linear Regression)')
plt.xlabel('Position level')
plt.ylabel('Salary')
plt.show()

# poly nomial visualization
plt.scatter(X, y, color = 'red')
plt.plot(X, lin_reg_2.predict(poly_reg.fit_transform(X)), color = 'blue')
plt.title('Truth or Bluff (Polynomial Regression)')
plt.xlabel('Position level')
plt.ylabel('Salary')
plt.show()

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

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

```



Out[11]: array([330378.78787879])

In []: