Random Forest Regression

Importing the libraries

```
In [0]:  import numpy as np
         import matplotlib.pyplot as plt
         import pandas as pd
```

Importing the dataset

```
In [0]:  dataset = pd.read_csv('Position_Salaries.csv')
         X = dataset.iloc[:, 1:-1].values
         y = dataset.iloc[:, -1].values
```

Training the Random Forest Regression model on the whole dataset

```
In [3]:  from sklearn.ensemble import RandomForestRegressor
         regressor = RandomForestRegressor(n_estimators = 10, random_state = 0)
         regressor.fit(X, y)
```

```
Out[3]:  RandomForestRegressor(bootstrap=True, ccp_alpha=0.0, criterion='mse',
                               max_depth=None, max_features='auto', max_leaf_nod
         es=None,
                               max_samples=None, min_impurity_decrease=0.0,
                               min_impurity_split=None, min_samples_leaf=1,
                               min_samples_split=2, min_weight_fraction_leaf=0.
         0,
                               n_estimators=10, n_jobs=None, oob_score=False,
                               random_state=0, verbose=0, warm_start=False)
```

Predicting a new result

```
In [4]:  regressor.predict([[6.5]])
```

```
Out[4]:  array([167000.])
```

Visualising the Random Forest Regression results (higher resolution)

```
In [5]:  X_grid = np.arange(min(X), max(X), 0.01)
         X_grid = X_grid.reshape((len(X_grid), 1))
         plt.scatter(X, y, color = 'red')
         plt.plot(X_grid, regressor.predict(X_grid), color = 'blue')
         plt.title('Truth or Bluff (Random Forest Regression)')
         plt.xlabel('Position level')
         plt.ylabel('Salary')
         plt.show()
```