

## RANDOM FOREST REGRESSION

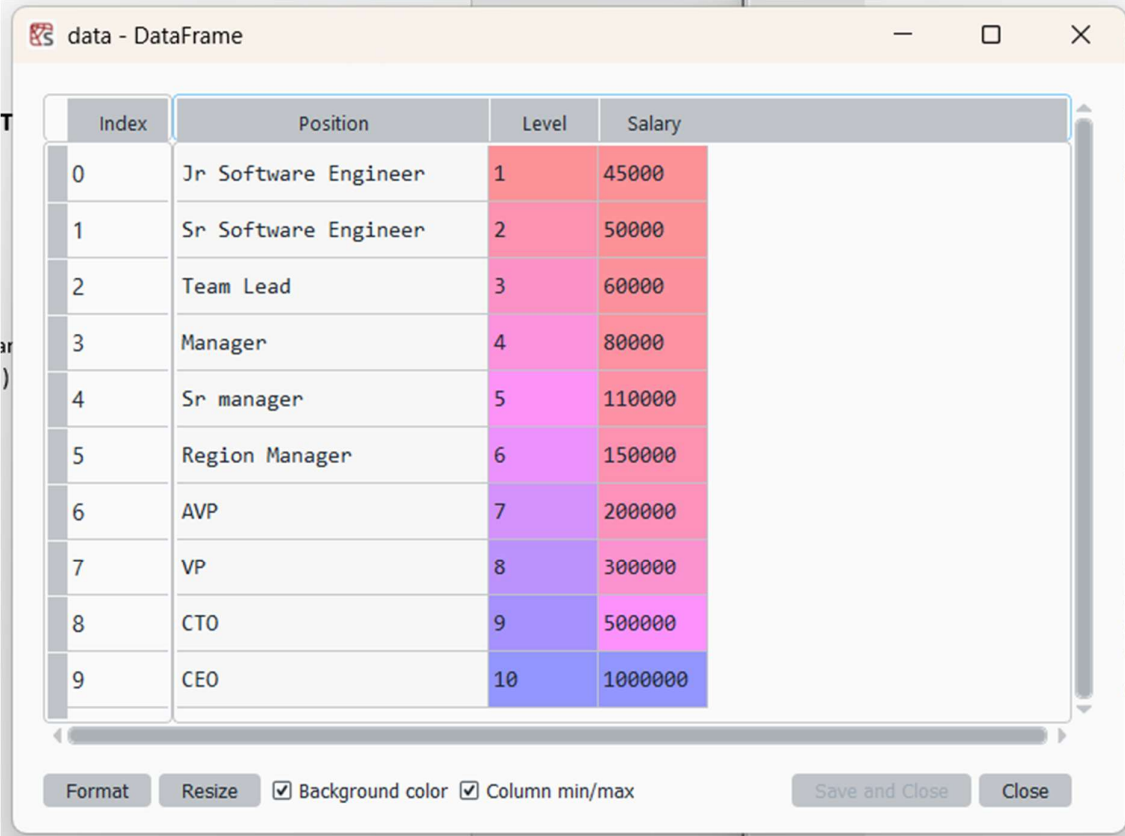
### # Importing Libraries

```
import pandas as pd
```

```
import matplotlib.pyplot as plt
```

### # let's import the dataset

```
data=pd.read_csv(r"C:\Users\TharunMahendra\NIT\6.Algorithms\1.  
Regression\Employee-Salary.csv")
```



Index	Position	Level	Salary
0	Jr Software Engineer	1	45000
1	Sr Software Engineer	2	50000
2	Team Lead	3	60000
3	Manager	4	80000
4	Sr manager	5	110000
5	Region Manager	6	150000
6	AVP	7	200000
7	VP	8	300000
8	CTO	9	500000
9	CEO	10	1000000

### #lets divide the dataset into independent and dependent variables

```
x=data.iloc[:,1:2].values
```

```
y=data.iloc[:,2].values
```

	0
0	1
1	2
2	3
3	4
4	5
5	6
6	7
7	8
8	9
9	10

	0
0	45000
1	50000
2	60000
3	80000
4	110000
5	150000
6	200000
7	300000
8	500000
9	1000000

### #fitting the RF model to the dataset

```
from sklearn.ensemble import RandomForestRegressor
```

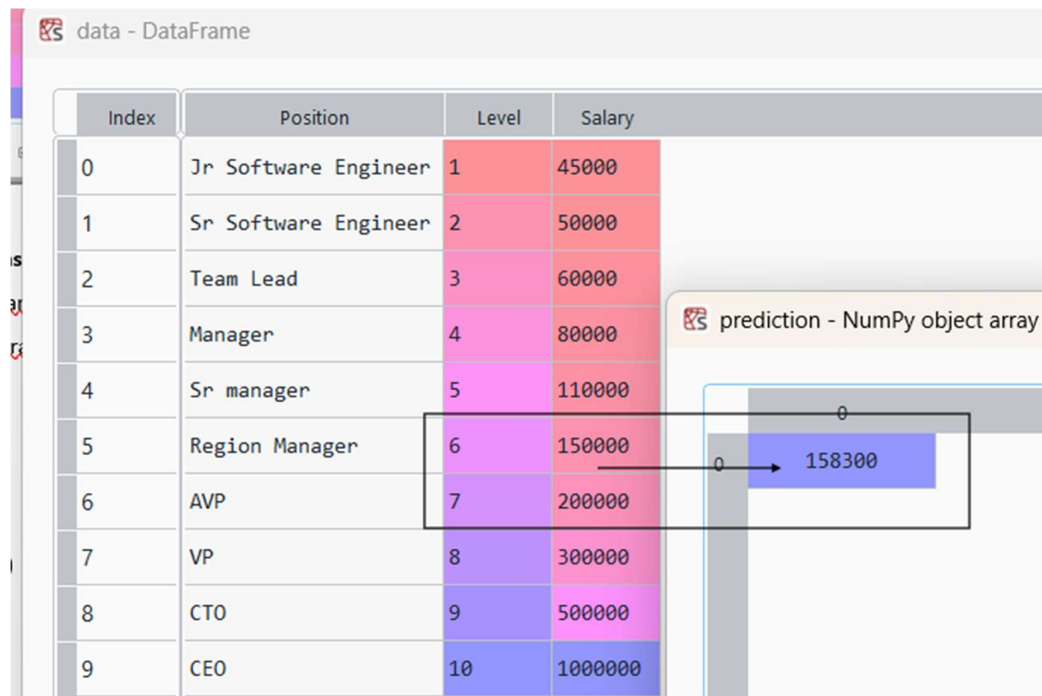
```
model=RandomForestRegressor(random_state=0) Parameter Tuning
```

```
model.fit(x, y)
```

### #predicting a new result

```
prediction=model.predict([[6.5]])
```

```
print(prediction)
```



## # Visualising the RF results

```
plt.scatter(x, y, color = 'red')  
plt.plot(x, model.predict(x), color = 'blue')  
plt.title('Truth or Bluff (Random Forest)')  
plt.xlabel('Position level')  
plt.ylabel('Salary')  
plt.show()
```

