```
import pandas as pd
from sklearn.metrics import mean_absolute_error
from sklearn.model_selection import train_test_split

college_path = ('/content/sample_data/College_Data.csv')
college_data = pd.read_csv(college_path)
```

```
labels = list(college_data['Grad_Rate'])
features = list(zip(college_data['Apps'], college_data['Accept'],
                    college_data['Enroll'],
college_data['Top10perc'], college_data['Top25perc'],
college_data['F.Undergrad'],
college_data['P.Undergrad'], college_data['Outstate'],
college_data['Room.Board'], college_data['Books'], college_data['Personal'],
 college_data['PhD'],  college_data['Terminal'], college_data['S.F.Ratio'],
 college_data['perc.alumni'], college_data['Expend']))
```

```
train_X, val_X, train_y, val_y = train_test_split
(features, labels, random_state=1)
from sklearn.ensemble import RandomForestRegressor
rf_model = RandomForestRegressor(random_state=3)
rf_model.fit(train_X,train_y)
predictions=rf_model.predict(val_X)
```

```
rf_val_mae = mean_absolute_error(predictions,val_y)
print("Validation MAE for Random Forest Model: {}".format(rf_val_mae))
```

```
Validation MAE for Random Forest Model: 9.07
```

```
print(rf_model.predict([[1500, 1200, 500, 30, 60, 1855, 640, 12800,
                         4590, 780, 1390, 70, 55, 13.5, 25, 9549]]))
```

```
[73.45]
```