Machine Learning for Economics and Finance

01_Auto_data_1

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Get and Set working directory:

[1]:
```
import os            # Package to access system related information
print(os.getcwd())   # Prints the current working directory
path = os.getcwd()
os.chdir(path)       # Set the working directory
```

```
/mnt/ds/home/UHH_MLSJ_2024/Code/Python/01_SupLearn_Regression
```

[2]:
```
from ISLP import load_data  # Package which contains the data
Auto = load_data('Auto')    # Loading the data
Auto.head()                 # Showing the first 5 Lines of Data.
```

[2]:

	mpg	cylinders	displacement	horsepower	weight	acceleration	year	origin	name
0	18.0	8	307.0	130	3504	12.0	70	1	chevrolet chevelle malibu
1	15.0	8	350.0	165	3693	11.5	70	1	buick skylark 320
2	18.0	8	318.0	150	3436	11.0	70	1	plymouth satellite
3	16.0	8	304.0	150	3433	12.0	70	1	amc rebel sst
4	17.0	8	302.0	140	3449	10.5	70	1	ford torino

[4]:
```
import statsmodels.formula.api as smf

# fit model on training data and calculate training MSE
fit_lm = smf.ols(formula='mpg ~ horsepower', data = Auto).fit()
```

[5]:
```
print(fit_lm.summary().tables[1])
```

```
==============================================================================
                 coef    std err          t      P>|t|      [0.025      0.975]
------------------------------------------------------------------------------
Intercept     39.9359      0.717     55.660      0.000      38.525      41.347
```

```
horsepower    -0.1578      0.006    -24.489      0.000      -0.171      -0.145
==============================================================================
```

[ ]: