```
import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
from sklearn.linear_model import LinearRegression as lr
import statsmodels.api as sm
import statsmodels.formula.api as smf

salary = pd.read_csv('CEO Salary Data.csv')

salary
```

```
                      CONAME    SALARY   GVKEY  YEAR PCEO  \
0     ADVANCED MICRO DEVICES   924.997    1161  2017  CEO
1     SKYWORKS SOLUTIONS INC   850.000    1327  2017  CEO
2         ANALOG DEVICES INC   878.000    1632  2017  CEO
3                  APPLE INC  3057.692    1690  2017  CEO
4      APPLIED MATERIALS INC  1000.000    1704  2017  CEO
..                       ...       ...     ...   ...  ...
89              FORTINET INC   450.882  183377  2017  CEO
90          SPS COMMERCE INC   495.000  183974  2017  CEO
91             MAXLINEAR INC   492.299  184551  2017  CEO
92             BLACKBAUD INC   700.027  260893  2017  CEO
93  ULTRA CLEAN HOLDINGS INC   406.923  264416  2017  CEO

                                    TITLE        EXEC_LNAME
EXEC_FNAME  \
0                            CEO & Chair         Su, Ph.D.
Lisa
1   CEO, President & Chairman of the Board           Griffin
Liam
2               President, CEO & Director             Roche
Vincent
3                         CEO & Director              Cook
Timothy
4      President, CEO & Executive Director         Dickerson
Gary
..                                     ...               ...        ..
.
89                Founder, Chairman & CEO               Xie
Ken
90                        CEO & Director             Black
Archie
91   Co-Founder, Chairman, CEO & President  Seendripu, Ph.D.
Kishore
92              President, CEO & Director           Gianoni
Michael
93                        CEO & Director        Scholhamer
James

    GENDER
0   FEMALE
```

```
1     MALE
2     MALE
3     MALE
4     MALE
..     ...
89    MALE
90    MALE
91    MALE
92    MALE
93    MALE

[94 rows x 9 columns]
```

```
company = pd.read_csv('Company Data.csv')
company = company.drop(columns=["conm"])
company
```

```
      GVKEY  fyear TICKER     PCC           MV
0      1161   2017    AMD   10.28    9940.7600
1      1327   2017   SWKS   94.95   18657.8900
2      1562   2017  AMSWA   11.63     390.5836
3      1632   2017    ADI   89.03   33656.4668
4      1690   2017   AAPL  169.23  790050.0981
..      ...    ...    ...     ...          ...
153  184551   2017    MXL   26.42    1780.7080
154  187740   2017   MTSI   32.54    2866.4602
155  187959   2017   BCOV    7.10     247.0658
156  260893   2017   BLKB   94.49    4542.7012
157  264416   2017   UCTT   23.09     777.3249

[158 rows x 5 columns]
```

```
market = pd.read_csv('Nasdaq.csv')
```

```
market = market[["TICKER",  "Sector", "Industry"]]
market
```

```
    TICKER      Sector                                  Industry
0     AAPL  Technology                  Computer Manufacturing
1     ACCD  Technology                       Interactive Media
2     ACIW  Technology                             EDP Services
3     ACLS  Technology          Industrial Machinery/Components
4     ADBE  Technology  Computer Software: Prepackaged Software
..     ...         ...                                     ...
228    XRX  Technology                             EDP Services
229   ZBRA  Technology            Computer peripheral equipment
230     ZI  Technology  Computer Software: Prepackaged Software
231     ZM  Technology  Computer Software: Prepackaged Software
232     ZS  Technology                             EDP Services

[233 rows x 3 columns]
```

```
joined = pd.merge(salary,       # the "left" dataframe
                          company,        # the "right" dataframe
                          how = 'left',   # which observations to keep?
Here we are specifying that we keep the "left" dataset
                          on = 'GVKEY'  # the join key
        )
joined
```

```
                       CONAME    SALARY   GVKEY  YEAR PCEO  \
0     ADVANCED MICRO DEVICES   924.997    1161  2017  CEO
1     SKYWORKS SOLUTIONS INC   850.000    1327  2017  CEO
2         ANALOG DEVICES INC   878.000    1632  2017  CEO
3                  APPLE INC  3057.692    1690  2017  CEO
4      APPLIED MATERIALS INC  1000.000    1704  2017  CEO
..                       ...       ...     ...   ...  ...
90              FORTINET INC   450.882  183377  2017  CEO
91          SPS COMMERCE INC   495.000  183974  2017  CEO
92             MAXLINEAR INC   492.299  184551  2017  CEO
93             BLACKBAUD INC   700.027  260893  2017  CEO
94  ULTRA CLEAN HOLDINGS INC   406.923  264416  2017  CEO

                                    TITLE        EXEC_LNAME
EXEC_FNAME  \
0                            CEO & Chair         Su, Ph.D.
Lisa
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Liam
2                President, CEO & Director             Roche
Vincent
3                           CEO & Director              Cook
Timothy
4      President, CEO & Executive Director         Dickerson
Gary
..                                    ...               ...        ..
.
90                 Founder, Chairman & CEO              Xie
Ken
91                          CEO & Director             Black
Archie
92   Co-Founder, Chairman, CEO & President  Seendripu, Ph.D.
Kishore
93               President, CEO & Director           Gianoni
Michael
94                          CEO & Director        Scholhamer
James

    GENDER  fyear TICKER     PCC           MV
0   FEMALE   2017    AMD   10.28    9940.7600
1     MALE   2017   SWKS   94.95   18657.8900
2     MALE   2017    ADI   89.03   33656.4668
```

```
3     MALE   2017   AAPL  169.23  790050.0981
4     MALE   2017   AMAT   51.12   59815.8000
..     ...    ...    ...     ...          ...
90    MALE   2017   FTNT   43.69    7335.1141
91    MALE   2017   SPSC   48.59     832.2009
92    MALE   2017    MXL   26.42    1780.7080
93    MALE   2017   BLKB   94.49    4542.7012
94    MALE   2017   UCTT   23.09     777.3249

[95 rows x 13 columns]
```

```
joined = pd.merge(joined,       # the "left" dataframe
                        market,        # the "right" dataframe
                        how = 'left',   # which observations to keep?
Here we are specifying that we keep the "left" dataset
                        on = 'TICKER'  # the join key
        )
```

```
joined
```

```
                       CONAME    SALARY   GVKEY  YEAR PCEO  \
0     ADVANCED MICRO DEVICES   924.997    1161  2017  CEO
1     SKYWORKS SOLUTIONS INC   850.000    1327  2017  CEO
2         ANALOG DEVICES INC   878.000    1632  2017  CEO
3                  APPLE INC  3057.692    1690  2017  CEO
4      APPLIED MATERIALS INC  1000.000    1704  2017  CEO
..                       ...       ...     ...   ...  ...
90              FORTINET INC   450.882  183377  2017  CEO
91          SPS COMMERCE INC   495.000  183974  2017  CEO
92             MAXLINEAR INC   492.299  184551  2017  CEO
93             BLACKBAUD INC   700.027  260893  2017  CEO
94  ULTRA CLEAN HOLDINGS INC   406.923  264416  2017  CEO

                                    TITLE        EXEC_LNAME
EXEC_FNAME  \
0                             CEO & Chair         Su, Ph.D.
Lisa
1   CEO, President & Chairman of the Board           Griffin
Liam
2                President, CEO & Director             Roche
Vincent
3                          CEO & Director              Cook
Timothy
4      President, CEO & Executive Director         Dickerson
Gary
..                                    ...               ...        ..
.
90                Founder, Chairman & CEO               Xie
Ken
91                         CEO & Director             Black
Archie
```

```
92   Co-Founder, Chairman, CEO & President  Seendripu, Ph.D.
Kishore
93               President, CEO & Director           Gianoni
Michael
94                         CEO & Director        Scholhamer
James

    GENDER  fyear TICKER     PCC           MV      Sector  \
0   FEMALE   2017    AMD   10.28    9940.7600  Technology
1     MALE   2017   SWKS   94.95   18657.8900  Technology
2     MALE   2017    ADI   89.03   33656.4668  Technology
3     MALE   2017   AAPL  169.23  790050.0981  Technology
4     MALE   2017   AMAT   51.12   59815.8000  Technology
..     ...    ...    ...     ...          ...         ...
90    MALE   2017   FTNT   43.69    7335.1141  Technology
91    MALE   2017   SPSC   48.59     832.2009  Technology
92    MALE   2017    MXL   26.42    1780.7080  Technology
93    MALE   2017   BLKB   94.49    4542.7012  Technology
94    MALE   2017   UCTT   23.09     777.3249  Technology

                                  Industry
0                           Semiconductors
1                           Semiconductors
2                           Semiconductors
3                    Computer Manufacturing
4                           Semiconductors
..                                     ...
90                Security Systems Services
91                             EDP Services
92                          Semiconductors
93  Computer Software: Prepackaged Software
94                          Semiconductors

[95 rows x 15 columns]
```

```
returns = pd.read_csv("returns.csv")
returns
```

```
      GVKEY    datadate  fyear indfmt consol popsrc datafmt   tic
curcd  \
0      1161  31/12/2017   2017   INDL      C      D     STD   AMD
USD
1      1161  31/12/2018   2018   INDL      C      D     STD   AMD
USD
2      1327  30/09/2017   2017   INDL      C      D     STD  SWKS
USD
3      1327  30/09/2018   2018   INDL      C      D     STD  SWKS
USD
4      1632  31/10/2017   2017   INDL      C      D     STD   ADI
USD
```

```
..      ...         ...    ...    ...    ...    ...     ...   ...   ..
.
199  184551  31/12/2018   2018   INDL      C      D     STD   MXL
USD
200  260893  31/12/2017   2017   INDL      C      D     STD  BLKB
USD
201  260893  31/12/2018   2018   INDL      C      D     STD  BLKB
USD
202  264416  31/12/2017   2017   INDL      C      D     STD  UCTT
USD
203  264416  31/12/2018   2018   INDL      C      D     STD  UCTT
USD

    costat  prcc_c      mkvalt   returns
0        A   10.28   9940.7600  0.795720
1        A   18.46  18552.3000       NaN
2        A   94.95  18657.8900 -0.294155
3        A   67.02  16091.9540       NaN
4        A   89.03  33656.4668 -0.035943
..     ...     ...         ...       ...
199      A   17.60   1224.0976       NaN
200      A   94.49   4542.7012 -0.334321
201      A   62.90   3054.8643       NaN
202      A   23.09    777.3249 -0.633175
203      A    8.47    330.8890       NaN

[204 rows x 13 columns]
```

```
returns = returns [["GVKEY", "fyear", "returns"]]
```

```
returns
```

```
      GVKEY  fyear   returns
0      1161   2017  0.795720
1      1161   2018       NaN
2      1327   2017 -0.294155
3      1327   2018       NaN
4      1632   2017 -0.035943
..      ...    ...       ...
199  184551   2018       NaN
200  260893   2017 -0.334321
201  260893   2018       NaN
202  264416   2017 -0.633175
203  264416   2018       NaN

[204 rows x 3 columns]
```

```
df = pd.merge(joined,       # the "left" dataframe
                        returns,        # the "right" dataframe
                        how = 'left',   # which observations to keep?
Here we are specifying that we keep the "left" dataset
```

```
                        on = 'GVKEY'  # the join key
        )

df

                       CONAME   SALARY   GVKEY  YEAR PCEO  \
0      ADVANCED MICRO DEVICES  924.997    1161  2017  CEO
1      ADVANCED MICRO DEVICES  924.997    1161  2017  CEO
2      SKYWORKS SOLUTIONS INC  850.000    1327  2017  CEO
3      SKYWORKS SOLUTIONS INC  850.000    1327  2017  CEO
4          ANALOG DEVICES INC  878.000    1632  2017  CEO
..                        ...      ...     ...   ...  ...
185             MAXLINEAR INC  492.299  184551  2017  CEO
186             BLACKBAUD INC  700.027  260893  2017  CEO
187             BLACKBAUD INC  700.027  260893  2017  CEO
188  ULTRA CLEAN HOLDINGS INC  406.923  264416  2017  CEO
189  ULTRA CLEAN HOLDINGS INC  406.923  264416  2017  CEO

                                       TITLE        EXEC_LNAME
EXEC_FNAME  \
0                              CEO & Chair         Su, Ph.D.
Lisa
1                              CEO & Chair         Su, Ph.D.
Lisa
2    CEO, President & Chairman of the Board           Griffin
Liam
3    CEO, President & Chairman of the Board           Griffin
Liam
4                 President, CEO & Director             Roche
Vincent
..                                      ...               ...        .
..
185   Co-Founder, Chairman, CEO & President  Seendripu, Ph.D.
Kishore
186               President, CEO & Director           Gianoni
Michael
187               President, CEO & Director           Gianoni
Michael
188                          CEO & Director        Scholhamer
James
189                          CEO & Director        Scholhamer
James

     GENDER  fyear_x TICKER    PCC          MV      Sector  \
0    FEMALE     2017    AMD  10.28   9940.7600  Technology
1    FEMALE     2017    AMD  10.28   9940.7600  Technology
2      MALE     2017   SWKS  94.95  18657.8900  Technology
3      MALE     2017   SWKS  94.95  18657.8900  Technology
4      MALE     2017    ADI  89.03  33656.4668  Technology
..      ...      ...    ...    ...         ...         ...
```

```
185    MALE     2017    MXL  26.42   1780.7080  Technology
186    MALE     2017   BLKB  94.49   4542.7012  Technology
187    MALE     2017   BLKB  94.49   4542.7012  Technology
188    MALE     2017   UCTT  23.09    777.3249  Technology
189    MALE     2017   UCTT  23.09    777.3249  Technology

                                    Industry  fyear_y   returns
0                             Semiconductors     2017  0.795720
1                             Semiconductors     2018       NaN
2                             Semiconductors     2017 -0.294155
3                             Semiconductors     2018       NaN
4                             Semiconductors     2017 -0.035943
..                                       ...      ...       ...
185                           Semiconductors     2018       NaN
186  Computer Software: Prepackaged Software     2017 -0.334321
187  Computer Software: Prepackaged Software     2018       NaN
188                           Semiconductors     2017 -0.633175
189                           Semiconductors     2018       NaN

[190 rows x 17 columns]
```

```
df = df.dropna()
df
```

```
                       CONAME    SALARY   GVKEY  YEAR PCEO  \
0      ADVANCED MICRO DEVICES   924.997    1161  2017  CEO
2      SKYWORKS SOLUTIONS INC   850.000    1327  2017  CEO
4          ANALOG DEVICES INC   878.000    1632  2017  CEO
6                   APPLE INC  3057.692    1690  2017  CEO
8       APPLIED MATERIALS INC  1000.000    1704  2017  CEO
..                        ...       ...     ...   ...  ...
180              FORTINET INC   450.882  183377  2017  CEO
182          SPS COMMERCE INC   495.000  183974  2017  CEO
184             MAXLINEAR INC   492.299  184551  2017  CEO
186             BLACKBAUD INC   700.027  260893  2017  CEO
188  ULTRA CLEAN HOLDINGS INC   406.923  264416  2017  CEO

                                      TITLE        EXEC_LNAME
EXEC_FNAME  \
0                              CEO & Chair         Su, Ph.D.
Lisa
2    CEO, President & Chairman of the Board           Griffin
Liam
4                 President, CEO & Director             Roche
Vincent
6                           CEO & Director              Cook
Timothy
8       President, CEO & Executive Director         Dickerson
Gary
..                                     ...               ...        .
```

```
..
180                  Founder, Chairman & CEO               Xie
Ken
182                           CEO & Director             Black
Archie
184   Co-Founder, Chairman, CEO & President  Seendripu, Ph.D.
Kishore
186                President, CEO & Director           Gianoni
Michael
188                           CEO & Director        Scholhamer
James

     GENDER  fyear_x TICKER     PCC           MV      Sector  \
0    FEMALE     2017    AMD   10.28    9940.7600  Technology
2      MALE     2017   SWKS   94.95   18657.8900  Technology
4      MALE     2017    ADI   89.03   33656.4668  Technology
6      MALE     2017   AAPL  169.23  790050.0981  Technology
8      MALE     2017   AMAT   51.12   59815.8000  Technology
..      ...      ...    ...     ...          ...         ...
180    MALE     2017   FTNT   43.69    7335.1141  Technology
182    MALE     2017   SPSC   48.59     832.2009  Technology
184    MALE     2017    MXL   26.42    1780.7080  Technology
186    MALE     2017   BLKB   94.49    4542.7012  Technology
188    MALE     2017   UCTT   23.09     777.3249  Technology

                                    Industry  fyear_y   returns
0                             Semiconductors     2017  0.795720
2                             Semiconductors     2017 -0.294155
4                             Semiconductors     2017 -0.035943
6                       Computer Manufacturing     2017 -0.067896
8                             Semiconductors     2017 -0.359546
..                                       ...      ...       ...
180                 Security Systems Services     2017  0.612039
182                               EDP Services     2017  0.695411
184                           Semiconductors     2017 -0.333838
186  Computer Software: Prepackaged Software     2017 -0.334321
188                           Semiconductors     2017 -0.633175

[95 rows x 17 columns]

df.describe()

            SALARY          GVKEY    YEAR  fyear_x          PCC  \
count    95.000000      95.000000    95.0     95.0    95.000000
mean    680.593042   71676.568421  2017.0   2017.0    87.234947
std     405.147769   67102.532898     0.0      0.0   152.838782
min       0.001000    1161.000000  2017.0   2017.0     4.200000
25%     460.625000   15095.000000  2017.0   2017.0    23.745000
50%     600.000000   31843.000000  2017.0   2017.0    48.900000
75%     846.154000  129151.000000  2017.0   2017.0    99.375000
```

```
max    3057.692000  264416.000000  2017.0   2017.0  1053.400000
```

```
                  MV  fyear_y    returns
count      95.000000     95.0  95.000000
mean    45840.681017   2017.0  -0.037420
std    149594.009840      0.0   0.304431
min        77.846400   2017.0  -0.633175
25%      1102.177750   2017.0  -0.258670
50%      2631.105600   2017.0  -0.067896
75%     11325.945900   2017.0   0.137018
max    790050.098100   2017.0   0.808134
```

```
df = df.drop(columns=["fyear_y", "fyear_x"])
```

```
df
```

```
                       CONAME    SALARY   GVKEY  YEAR PCEO  \
0      ADVANCED MICRO DEVICES   924.997    1161  2017  CEO
2      SKYWORKS SOLUTIONS INC   850.000    1327  2017  CEO
4          ANALOG DEVICES INC   878.000    1632  2017  CEO
6                  APPLE INC  3057.692    1690  2017  CEO
8       APPLIED MATERIALS INC  1000.000    1704  2017  CEO
..                        ...       ...     ...   ...  ...
180              FORTINET INC   450.882  183377  2017  CEO
182          SPS COMMERCE INC   495.000  183974  2017  CEO
184             MAXLINEAR INC   492.299  184551  2017  CEO
186             BLACKBAUD INC   700.027  260893  2017  CEO
188  ULTRA CLEAN HOLDINGS INC   406.923  264416  2017  CEO

                                      TITLE        EXEC_LNAME
EXEC_FNAME  \
0                                CEO & Chair         Su, Ph.D.
Lisa
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Liam
4                 President, CEO & Director             Roche
Vincent
6                           CEO & Director              Cook
Timothy
8       President, CEO & Executive Director         Dickerson
Gary
..                                       ...               ...        .
..
180                 Founder, Chairman & CEO               Xie
Ken
182                         CEO & Director              Black
Archie
184   Co-Founder, Chairman, CEO & President  Seendripu, Ph.D.
Kishore
186              President, CEO & Director           Gianoni
Michael
```

```
188                          CEO & Director        Scholhamer
James

     GENDER TICKER     PCC           MV      Sector  \
0    FEMALE    AMD   10.28    9940.7600  Technology
2      MALE   SWKS   94.95   18657.8900  Technology
4      MALE    ADI   89.03   33656.4668  Technology
6      MALE   AAPL  169.23  790050.0981  Technology
8      MALE   AMAT   51.12   59815.8000  Technology
..      ...    ...     ...          ...         ...
180    MALE   FTNT   43.69    7335.1141  Technology
182    MALE   SPSC   48.59     832.2009  Technology
184    MALE    MXL   26.42    1780.7080  Technology
186    MALE   BLKB   94.49    4542.7012  Technology
188    MALE   UCTT   23.09     777.3249  Technology

                                    Industry   returns
0                             Semiconductors  0.795720
2                             Semiconductors -0.294155
4                             Semiconductors -0.035943
6                      Computer Manufacturing -0.067896
8                             Semiconductors -0.359546
..                                       ...       ...
180                 Security Systems Services  0.612039
182                               EDP Services  0.695411
184                           Semiconductors -0.333838
186  Computer Software: Prepackaged Software -0.334321
188                           Semiconductors -0.633175

[95 rows x 15 columns]

df.describe()

            SALARY          GVKEY    YEAR          PCC             MV
\
count    95.000000      95.000000    95.0    95.000000      95.000000

mean    680.593042   71676.568421  2017.0    87.234947   45840.681017

std     405.147769   67102.532898     0.0   152.838782  149594.009840

min       0.001000    1161.000000  2017.0     4.200000      77.846400

25%     460.625000   15095.000000  2017.0    23.745000    1102.177750

50%     600.000000   31843.000000  2017.0    48.900000    2631.105600

75%     846.154000  129151.000000  2017.0    99.375000   11325.945900

max    3057.692000  264416.000000  2017.0  1053.400000  790050.098100
```

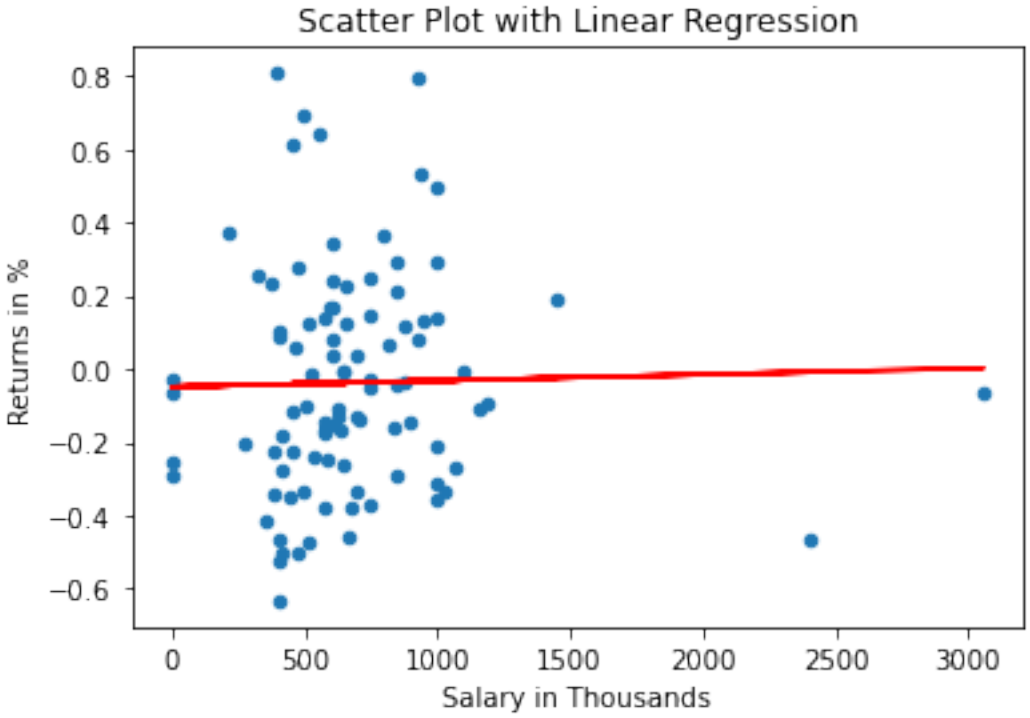
```
          returns
count  95.000000
mean   -0.037420
std     0.304431
min    -0.633175
25%    -0.258670
50%    -0.067896
75%     0.137018
max     0.808134
```

```
fit = np.polyfit(df['SALARY'], df['returns'], deg=1)
df['fit'] = fit[0] * df['SALARY'] + fit[1]

df.plot(kind='scatter', x='SALARY', y='returns')
plt.plot(df['SALARY'], df['fit'], color='red')

# set the labels and title
plt.xlabel('Salary in Thousands')
plt.ylabel('Returns in %')
plt.title('Scatter Plot with Linear Regression')

# show the plot
plt.show()
```




```
results = smf.ols("returns ~ SALARY + MV + PCC", data=df).fit()
```

```
print(results.summary())
```

```
                            OLS Regression Results
==============================================================================
========
Dep. Variable:                returns   R-squared:
0.001
Model:                            OLS   Adj. R-squared:
-0.032
Method:                 Least Squares   F-statistic:
0.02656
Date:                Mon, 20 Feb 2023   Prob (F-statistic):
0.994
Time:                        13:50:17   Log-Likelihood:
-21.270
No. Observations:                  95   AIC:
50.54
Df Residuals:                      91   BIC:
60.76
Df Model:                           3
Covariance Type:            nonrobust
==============================================================================
========
                 coef    std err          t      P>|t|      [0.025
0.975]
------------------------------------------------------------------------------
--------
Intercept     -0.0552      0.071     -0.774      0.441      -0.197
0.087
SALARY      2.351e-05   8.86e-05      0.265      0.791      -0.000
0.000
MV         -6.179e-08   3.48e-07     -0.178      0.859   -7.53e-07
6.29e-07
PCC         5.341e-05      0.000      0.168      0.867      -0.001
0.001
==============================================================================
========
Omnibus:                        6.931   Durbin-Watson:
1.767
Prob(Omnibus):                  0.031   Jarque-Bera (JB):
6.571
Skew:                           0.633   Prob(JB):
0.0374
Kurtosis:                       3.237   Cond. No.
3.50e+05
==============================================================================
========
```

```
Notes:
[1] Standard Errors assume that the covariance matrix of the errors is
correctly specified.
[2] The condition number is large, 3.5e+05. This might indicate that
there are
strong multicollinearity or other numerical problems.
```

```
df.to_csv(r'C:\Users\yuxua\Desktop\Merged Data.csv', index = False)
```

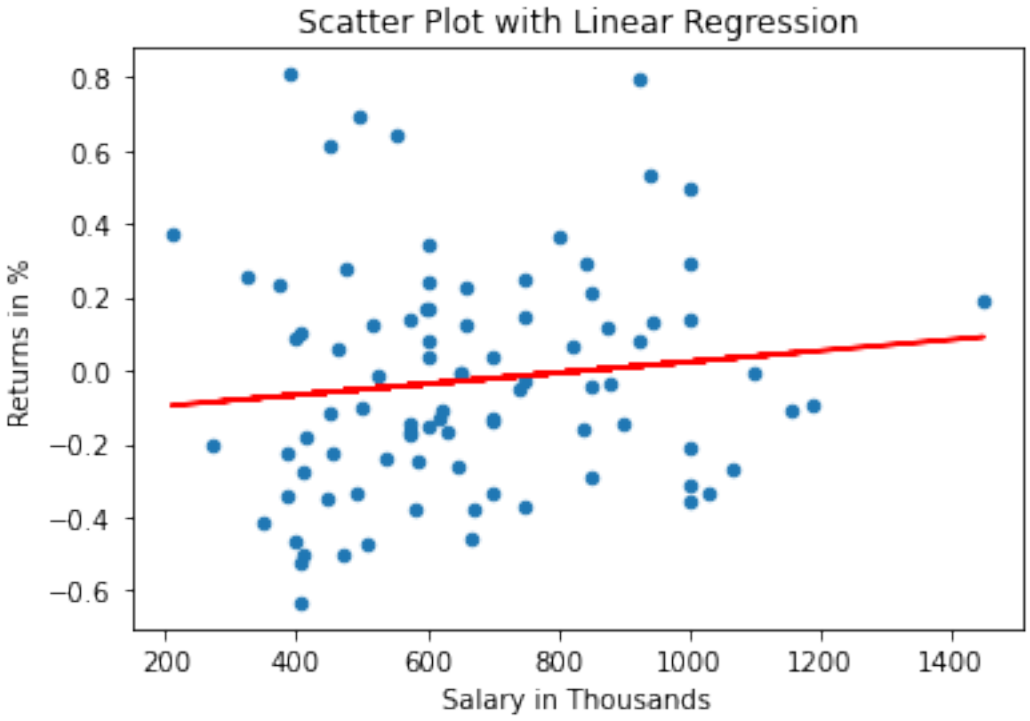
```
df = df.drop(df[df['SALARY'] > 2000 ].index)
df = df.drop(df[df['SALARY'] < 10].index)
```

```
fit = np.polyfit(df['SALARY'], df['returns'], deg=1)
df['fit'] = fit[0] * df['SALARY'] + fit[1]
```

```
df.plot(kind='scatter', x='SALARY', y='returns')
plt.plot(df['SALARY'], df['fit'], color='red')
```

```
# set the labels and title
plt.xlabel('Salary in Thousands')
plt.ylabel('Returns in %')
plt.title('Scatter Plot with Linear Regression')
```

```
# show the plot
plt.show()
```




```
print(results.summary())
```

OLS Regression Results

Dep. Variable:	returns	R-squared:	0.001
Model:	OLS	Adj. R-squared:	-0.032
Method:	Least Squares	F-statistic:	0.02656
Date:	Mon, 20 Feb 2023	Prob (F-statistic):	0.994
Time:	14:00:50	Log-Likelihood:	-21.270
No. Observations:	95	AIC:	50.54
Df Residuals:	91	BIC:	60.76
Df Model:	3		
Covariance Type:	nonrobust		

	coef	std err	t	P>|t|	[0.025	0.975]
Intercept	-0.0552	0.071	-0.774	0.441	-0.197	0.087
SALARY	2.351e-05	8.86e-05	0.265	0.791	-0.000	0.000
MV	-6.179e-08	3.48e-07	-0.178	0.859	-7.53e-07	6.29e-07
PCC	5.341e-05	0.000	0.168	0.867	-0.001	0.001

Omnibus:	6.931	Durbin-Watson:	1.767
Prob(Omnibus):	0.031	Jarque-Bera (JB):	6.571
Skew:	0.633	Prob(JB):	0.0374
Kurtosis:	3.237	Cond. No.	3.50e+05

Notes:

[1] Standard Errors assume that the covariance matrix of the errors is correctly specified.
[2] The condition number is large, 3.5e+05. This might indicate that there are
strong multicollinearity or other numerical problems.

```
df.describe()
```

	SALARY	GVKEY	YEAR	PCC	MV
count	89.000000	89.000000	89.0	89.000000	89.000000
mean	665.153292	71729.280899	2017.0	85.180337	34101.435880
std	237.137403	67712.425552	0.0	157.250155	122122.606578
min	210.000000	1161.000000	2017.0	4.200000	77.846400
25%	475.000000	16710.000000	2017.0	22.120000	1024.909600
50%	620.000000	31607.000000	2017.0	47.160000	2631.105600
75%	842.308000	133288.000000	2017.0	89.030000	11168.314000
max	1450.000000	264416.000000	2017.0	1053.400000	729439.025200

	returns	fit
count	89.000000	89.000000
mean	-0.026824	-0.026824
std	0.309084	0.035744
min	-0.633175	-0.095431
25%	-0.246311	-0.055487
50%	-0.053590	-0.033630
75%	0.149886	-0.000121
max	0.808134	0.091478