01-SF Salaries Exercise

April 26, 2019

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1 SF Salaries Exercise

Welcome to a quick exercise for you to practice your pandas skills! We will be using the SF Salaries Dataset from Kaggle! Just follow along and complete the tasks outlined in bold below. The tasks will get harder and harder as you go along.

** Import pandas as pd.**

** Read Salaries.csv as a dataframe called sal.**

** Check the head of the DataFrame. **

In [8]:

Out[8]:

	Id	EmployeeName	JobTitle	BasePay	OvertimePay	OtherPay	Benefits	TotalPay	TotalPayBenefits	Year	Notes	Agency	Status
0	1	NATHANIEL FORD	GENERAL MANAGER-METROPOLITAN TRANSIT AUTHORITY	167411.18	0.00	400184.25	NaN	567595.43	567595.43	2011	NaN	San Francisco	NaN
1	2	GARY JIMENEZ	CAPTAIN III (POLICE DEPARTMENT)	155966.02	245131.88	137811.38	NaN	538909.28	538909.28	2011	NaN	San Francisco	NaN
2	3	ALBERT PARDINI	CAPTAIN III (POLICE DEPARTMENT)	212739.13	106088.18	16452.60	NaN	335279.91	335279.91	2011	NaN	San Francisco	NaN
3	4	CHRISTOPHER CHONG	WIRE ROPE CABLE MAINTENANCE MECHANIC	77916.00	56120.71	198306.90	NaN	332343.61	332343.61	2011	NaN	San Francisco	NaN
4	5	PATRICK GARDNER	DEPUTY CHIEF OF DEPARTMENT,(FIRE DEPARTMENT)	134401.60	9737.00	182234.59	NaN	326373.19	326373.19	2011	NaN	San Francisco	NaN

** Use the .info() method to find out how many entries there are.**

In [9]:

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 148654 entries, 0 to 148653
Data columns (total 13 columns):
Id                  148654 non-null int64
EmployeeName        148654 non-null object
JobTitle            148654 non-null object
BasePay             148045 non-null float64
OvertimePay         148650 non-null float64
OtherPay            148650 non-null float64
Benefits            112491 non-null float64
TotalPay            148654 non-null float64
TotalPayBenefits    148654 non-null float64
Year                148654 non-null int64
Notes               0 non-null float64
Agency              148654 non-null object
Status              0 non-null float64
dtypes: float64(8), int64(2), object(3)
memory usage: 14.7+ MB
```

What is the average BasePay ?

In [10]:

Out[10]: 66325.44884050643

** What is the highest amount of OvertimePay in the dataset ? **

In [11]:

Out[11]: 245131.88

** What is the job title of JOSEPH DRISCOLL ? Note: Use all caps, otherwise you may get an answer that doesn't match up (there is also a lowercase Joseph Driscoll). **

In [12]:

```
Out[12]: 24    CAPTAIN, FIRE SUPPRESSION
         Name: JobTitle, dtype: object
```

** How much does JOSEPH DRISCOLL make (including benefits)? **

In [13]:

```
Out[13]: 24    270324.91
         Name: TotalPayBenefits, dtype: float64
```

** What is the name of highest paid person (including benefits)?**

In [14]:

Out[14]:
```
   Id    EmployeeName                                          JobTitle  \
0   1  NATHANIEL FORD  GENERAL MANAGER-METROPOLITAN TRANSIT AUTHORITY

     BasePay  OvertimePay   OtherPay  Benefits   TotalPay  TotalPayBenefits  \
0  167411.18          0.0  400184.25       NaN  567595.43         567595.43

   Year  Notes         Agency  Status
0  2011    NaN  San Francisco     NaN
```

** What is the name of lowest paid person (including benefits)? Do you notice something strange about how much he or she is paid?**

In [15]:

Out[15]:
```
             Id EmployeeName                    JobTitle  BasePay  OvertimePay  \
148653  148654    Joe Lopez  Counselor, Log Cabin Ranch      0.0          0.0

        OtherPay  Benefits  TotalPay  TotalPayBenefits  Year  Notes  \
148653   -618.13       0.0   -618.13           -618.13  2014    NaN

                Agency  Status
148653  San Francisco     NaN
```

** What was the average (mean) BasePay of all employees per year? (2011-2014) ? **

In [16]:

Out[16]:
```
Year
2011    63595.956517
2012    65436.406857
2013    69630.030216
2014    66564.421924
Name: BasePay, dtype: float64
```

** How many unique job titles are there? **

In [17]:

Out[17]: 2159

** What are the top 5 most common jobs? **

In [18]:

Out[18]:
```
Transit Operator                7036
Special Nurse                   4389
Registered Nurse                3736
Public Svc Aide-Public Works    2518
Police Officer 3                2421
Name: JobTitle, dtype: int64
```

** How many Job Titles were represented by only one person in 2013? (e.g. Job Titles with only one occurence in 2013?) **

In [19]:

Out[19]: 202

** How many people have the word Chief in their job title? (This is pretty tricky) **

In [21]:

Out[21]: 477

** Bonus: Is there a correlation between length of the Job Title string and Salary? **

In [23]:

Out[23]:

	title_len	TotalPayBenefits
title_len	1.000000	-0.036878
TotalPayBenefits	-0.036878	1.000000

2 Great Job!