

Rama - Write a Data Science Blog Post

June 2, 2020

Each stage of the CRISP-DM process will be looked at in this notebook. These stages are:

- Business Understanding
- Data Understanding
- Prepare Data
- Data Modeling
- Evaluate the Results

1 1. Business Understanding

I have explored here the 2017 Stack Overflow results in order to obtain some information on software developers like the importance of the job industry to be assessed while applying, what developers would require when they share an office and which development environment has been used regularly. There will be three questions I will seek to answer in order to get this information: 1. If two developers are sharing an office, is it okay for one of them to get a mechanical keyboard with loud "clicky" keys? 2. Which development environment(s) do we use regularly? 3. When you're assessing potential jobs to apply to, how important are each of the following to you? The languages, frameworks, and other technologies I'd be working with?

2 2. Data Understanding

In order to gain some understanding of the data I loaded it into a dataframe and ran `df.head()`. This gave me 5 example entries of each column.

```
In [1]: import pandas as pd
import matplotlib.pyplot as plt

data_path = r'./survey_results_public.csv'

data_load = pd.read_csv(data_path)

df = pd.DataFrame(data_load)

df
```

```

Out[1]:
Respondent
0 1 Student
1 2 Student
2 3 Professional developer
3 4 Professional non-developer who sometimes write...
4 5 Professional developer
5 6 Student
6 7 Professional non-developer who sometimes write...
7 8 Professional developer
8 9 Professional developer
9 10 Professional developer
10 11 Professional non-developer who sometimes write...
11 12 Professional developer
12 13 Used to be a professional developer
13 14 Professional developer
14 15 Professional developer
15 16 Professional developer
16 17 Professional developer
17 18 Professional developer
18 19 Professional developer
19 20 Professional developer
20 21 Professional developer
21 22 Professional developer
22 23 Professional developer
23 24 Professional developer
24 25 Professional developer
25 26 Professional developer
26 27 Professional developer
27 28 Professional developer
28 29 Professional non-developer who sometimes write...
29 30 Professional non-developer who sometimes write...
... ...
19072 19073 Professional developer
19073 19074 Professional developer
19074 19075 Student
19075 19076 Professional developer
19076 19077 Professional developer
19077 19078 Professional developer
19078 19079 Student
19079 19080 Professional developer
19080 19081 Professional non-developer who sometimes write...
19081 19082 Professional developer
19082 19083 Professional non-developer who sometimes write...
19083 19084 Professional developer
19084 19085 Professional developer
19085 19086 Professional developer
19086 19087 Professional developer
19087 19088 Professional developer

```

19088	19089	Professional developer
19089	19090	Professional developer
19090	19091	Professional developer
19091	19092	Professional developer
19092	19093	Professional non-developer who sometimes write...
19093	19094	Professional developer
19094	19095	Student
19095	19096	Professional developer
19096	19097	Professional developer
19097	19098	Professional developer
19098	19099	Student
19099	19100	Professional non-developer who sometimes write...
19100	19101	Professional developer
19101	19102	Professional developer

	ProgramHobby	Country \
0	Yes, both	United States
1	Yes, both	United Kingdom
2	Yes, both	United Kingdom
3	Yes, both	United States
4	Yes, I program as a hobby	Switzerland
5	Yes, both	New Zealand
6	Yes, both	United States
7	Yes, both	Poland
8	Yes, I program as a hobby	Colombia
9	Yes, I program as a hobby	France
10	Yes, I program as a hobby	United States
11	No	Canada
12	Yes, I program as a hobby	United Kingdom
13	Yes, both	Germany
14	Yes, I program as a hobby	United Kingdom
15	Yes, I program as a hobby	United States
16	Yes, both	United Kingdom
17	Yes, both	United States
18	Yes, I program as a hobby	United States
19	Yes, I program as a hobby	Greece
20	Yes, I program as a hobby	Brazil
21	Yes, I program as a hobby	United Kingdom
22	No	Israel
23	Yes, both	Italy
24	Yes, I program as a hobby	Belgium
25	Yes, I program as a hobby	United States
26	No	India
27	Yes, I program as a hobby	United States
28	Yes, both	Israel
29	Yes, I program as a hobby	United States
...
19072	No	France

19073	Yes, I program as a hobby	United Kingdom
19074	Yes, I program as a hobby	South Africa
19075	Yes, I program as a hobby	Germany
19076	No	United Kingdom
19077	Yes, I program as a hobby	France
19078	Yes, both	Germany
19079	Yes, I program as a hobby	United States
19080	Yes, I program as a hobby	United States
19081	Yes, both	Germany
19082	No	United Kingdom
19083	Yes, I program as a hobby	United States
19084	Yes, I program as a hobby	India
19085	Yes, I contribute to open source projects	Germany
19086	No	Germany
19087	Yes, I program as a hobby	Spain
19088	Yes, I program as a hobby	United Kingdom
19089	Yes, I program as a hobby	United Kingdom
19090	No	India
19091	No	Sweden
19092	No	United States
19093	Yes, both	India
19094	Yes, I program as a hobby	United Kingdom
19095	Yes, both	United States
19096	No	France
19097	Yes, I program as a hobby	Canada
19098	Yes, I program as a hobby	India
19099	Yes, I program as a hobby	United Kingdom
19100	Yes, I program as a hobby	United States
19101	Yes, I program as a hobby	France

	University	EmploymentStatus \
0	No	Not employed, and not looking for work
1	Yes, full-time	Employed part-time
2	No	Employed full-time
3	No	Employed full-time
4	No	Employed full-time
5	Yes, full-time	Not employed, and not looking for work
6	No	Employed full-time
7	No	Employed full-time
8	Yes, part-time	Employed full-time
9	Yes, full-time	Independent contractor, freelancer, or self-em...
10	No	Employed full-time
11	No	Employed full-time
12	No	Not employed, but looking for work
13	No	Employed full-time
14	No	Employed full-time
15	Yes, part-time	Independent contractor, freelancer, or self-em...
16	No	Not employed, and not looking for work

17	Yes, part-time		Employed full-time
18	No		Employed full-time
19	No		Employed full-time
20	No		Employed full-time
21	No		Employed full-time
22	No		Employed full-time
23	No	Independent contractor, freelancer, or self-em...	
24	No		Employed full-time
25	No		Employed full-time
26	No		Employed full-time
27	No		Employed full-time
28	No		Employed full-time
29	No		Employed full-time
...
19072	No		Employed full-time
19073	No		Employed full-time
19074	No	Independent contractor, freelancer, or self-em...	
19075	Yes, part-time		Employed part-time
19076	Yes, full-time		Employed full-time
19077	No		Employed full-time
19078	No	Independent contractor, freelancer, or self-em...	
19079	No		Employed full-time
19080	No		Employed full-time
19081	No		Employed full-time
19082	No		Employed full-time
19083	No		Employed part-time
19084	No		Employed full-time
19085	No		Employed full-time
19086	Yes, part-time		Employed full-time
19087	No		Employed full-time
19088	No		Employed full-time
19089	No		Employed full-time
19090	No	Independent contractor, freelancer, or self-em...	
19091	No		Employed full-time
19092	No		Employed full-time
19093	I prefer not to say	Independent contractor, freelancer, or self-em...	
19094	Yes, full-time	Independent contractor, freelancer, or self-em...	
19095	No		Employed full-time
19096	No		Employed full-time
19097	No		Employed full-time
19098	No	Not employed, and not looking for work	
19099	No	Independent contractor, freelancer, or self-em...	
19100	No		Employed full-time
19101	No		Employed full-time

	FormalEducation \
0	Secondary school
1	Some college/university study without earning ...

2	Bachelor's degree
3	Doctoral degree
4	Master's degree
5	Secondary school
6	Master's degree
7	Master's degree
8	Bachelor's degree
9	Master's degree
10	Bachelor's degree
11	Bachelor's degree
12	Bachelor's degree
13	Some college/university study without earning ...
14	Professional degree
15	Primary/elementary school
16	Secondary school
17	Bachelor's degree
18	Bachelor's degree
19	Doctoral degree
20	Bachelor's degree
21	Bachelor's degree
22	Bachelor's degree
23	Secondary school
24	Master's degree
25	Master's degree
26	Bachelor's degree
27	Bachelor's degree
28	Some college/university study without earning ...
29	Bachelor's degree
...	...
19072	Master's degree
19073	Master's degree
19074	Primary/elementary school
19075	Bachelor's degree
19076	Some college/university study without earning ...
19077	Master's degree
19078	Secondary school
19079	Bachelor's degree
19080	Bachelor's degree
19081	Bachelor's degree
19082	Some college/university study without earning ...
19083	Some college/university study without earning ...
19084	Bachelor's degree
19085	Some college/university study without earning ...
19086	Professional degree
19087	Professional degree
19088	Bachelor's degree
19089	Some college/university study without earning ...
19090	I prefer not to answer

19091	Master's degree
19092	Bachelor's degree
19093	Bachelor's degree
19094	Secondary school
19095	Bachelor's degree
19096	Master's degree
19097	Bachelor's degree
19098	Secondary school
19099	Bachelor's degree
19100	Some college/university study without earning ...
19101	Master's degree

	MajorUndergrad \
0	NaN
1	Computer science or software engineering
2	Computer science or software engineering
3	A non-computer-focused engineering discipline
4	Computer science or software engineering
5	NaN
6	A non-computer-focused engineering discipline
7	Computer science or software engineering
8	Computer science or software engineering
9	Computer science or software engineering
10	A social science
11	Computer science or software engineering
12	Mathematics or statistics
13	Computer science or software engineering
14	Computer engineering or electrical/electronics...
15	NaN
16	NaN
17	Computer science or software engineering
18	Computer science or software engineering
19	A natural science
20	Computer science or software engineering
21	A natural science
22	Computer engineering or electrical/electronics...
23	NaN
24	Computer science or software engineering
25	Computer science or software engineering
26	Computer science or software engineering
27	A business discipline
28	Computer engineering or electrical/electronics...
29	A business discipline
...	...
19072	Computer science or software engineering
19073	Computer science or software engineering
19074	NaN
19075	Computer science or software engineering

19076	Computer science or software engineering
19077	Computer science or software engineering
19078	NaN
19079	Computer science or software engineering
19080	A natural science
19081	Computer science or software engineering
19082	Information technology, networking, or system ...
19083	Computer science or software engineering
19084	Computer science or software engineering
19085	I never declared a major
19086	Management information systems
19087	Computer programming or Web development
19088	A humanities discipline
19089	Information technology, networking, or system ...
19090	NaN
19091	Computer science or software engineering
19092	Management information systems
19093	Computer engineering or electrical/electronics...
19094	NaN
19095	Computer science or software engineering
19096	Computer science or software engineering
19097	A business discipline
19098	NaN
19099	Computer science or software engineering
19100	A humanities discipline
19101	Computer science or software engineering

	HomeRemote \
0	NaN
1	More than half, but not all, the time
2	Less than half the time, but at least one day ...
3	Less than half the time, but at least one day ...
4	Never
5	NaN
6	Less than half the time, but at least one day ...
7	All or almost all the time (I'm full-time remote)
8	Less than half the time, but at least one day ...
9	It's complicated
10	All or almost all the time (I'm full-time remote)
11	A few days each month
12	NaN
13	Less than half the time, but at least one day ...
14	All or almost all the time (I'm full-time remote)
15	All or almost all the time (I'm full-time remote)
16	NaN
17	All or almost all the time (I'm full-time remote)
18	A few days each month
19	Less than half the time, but at least one day ...

20 Less than half the time, but at least one day ...
 21 A few days each month
 22 A few days each month
 23 All or almost all the time (I'm full-time remote)
 24 Never
 25 Less than half the time, but at least one day ...
 26 Never
 27 A few days each month
 28 A few days each month
 29 Less than half the time, but at least one day ...
 ...
 19072 A few days each month
 19073 More than half, but not all, the time
 19074 More than half, but not all, the time
 19075 A few days each month
 19076 Never
 19077 About half the time
 19078 All or almost all the time (I'm full-time remote)
 19079 Never
 19080 All or almost all the time (I'm full-time remote)
 19081 Never
 19082 Less than half the time, but at least one day ...
 19083 Less than half the time, but at least one day ...
 19084 Less than half the time, but at least one day ...
 19085 A few days each month
 19086 A few days each month
 19087 Never
 19088 It's complicated
 19089 A few days each month
 19090 All or almost all the time (I'm full-time remote)
 19091 Never
 19092 Never
 19093 More than half, but not all, the time
 19094 About half the time
 19095 A few days each month
 19096 Never
 19097 A few days each month
 19098 NaN
 19099 Never
 19100 Less than half the time, but at least one day ...
 19101 All or almost all the time (I'm full-time remote)

	CompanySize	...	StackOverflowMakeMoney \
0	NaN	...	Strongly disagree
1	20 to 99 employees	...	Strongly disagree
2	10,000 or more employees	...	Disagree
3	10,000 or more employees	...	Disagree
4	10 to 19 employees	...	NaN

5		NaN	...	Disagree
6	20 to 99 employees		...	Disagree
7	Fewer than 10 employees		...	Somewhat agree
8	5,000 to 9,999 employees		...	Strongly disagree
9		NaN	...	Disagree
10	100 to 499 employees		...	Strongly disagree
11	100 to 499 employees		...	NaN
12		NaN	...	Strongly disagree
13	Fewer than 10 employees		...	Disagree
14	5,000 to 9,999 employees		...	Disagree
15		NaN	...	Disagree
16		NaN	...	Strongly disagree
17	1,000 to 4,999 employees		...	Disagree
18	10,000 or more employees		...	NaN
19	Fewer than 10 employees		...	Strongly disagree
20	10,000 or more employees		...	NaN
21	20 to 99 employees		...	Disagree
22	500 to 999 employees		...	Somewhat agree
23		NaN	...	Disagree
24	20 to 99 employees		...	NaN
25	10,000 or more employees		...	Disagree
26	5,000 to 9,999 employees		...	NaN
27	100 to 499 employees		...	NaN
28	10 to 19 employees		...	Disagree
29	10,000 or more employees		...	NaN
...	
19072	10 to 19 employees		...	NaN
19073	Fewer than 10 employees		...	NaN
19074		NaN	...	Disagree
19075	10 to 19 employees		...	Disagree
19076	1,000 to 4,999 employees		...	Disagree
19077	10 to 19 employees		...	NaN
19078		NaN	...	Strongly disagree
19079	Fewer than 10 employees		...	NaN
19080	Fewer than 10 employees		...	NaN
19081	20 to 99 employees		...	Disagree
19082	20 to 99 employees		...	NaN
19083	10 to 19 employees		...	NaN
19084	1,000 to 4,999 employees		...	Agree
19085	100 to 499 employees		...	Disagree
19086	100 to 499 employees		...	Disagree
19087	10 to 19 employees		...	NaN
19088	10 to 19 employees		...	Disagree
19089	I prefer not to answer		...	Disagree
19090		NaN	...	NaN
19091	100 to 499 employees		...	Strongly disagree
19092	10,000 or more employees		...	NaN
19093		NaN	...	NaN

19094		NaN	...	Strongly disagree
19095	100 to 499 employees		...	Disagree
19096	20 to 99 employees		...	Strongly disagree
19097	10 to 19 employees		...	Disagree
19098		NaN	...	NaN
19099		NaN	...	NaN
19100	100 to 499 employees		...	Disagree
19101	100 to 499 employees		...	NaN

	Gender	HighestEducationParents \
0	Male	High school
1	Male	A master's degree
2	Male	A professional degree
3	Male	A doctoral degree
4	NaN	NaN
5	NaN	A bachelor's degree
6	Male	A doctoral degree
7	Male	A master's degree
8	Male	A bachelor's degree
9	Male	A doctoral degree
10	Female	Some college/university study, no bachelor's d...
11	NaN	NaN
12	Male	A bachelor's degree
13	Female	A master's degree
14	Male	High school
15	Male	A doctoral degree
16	Male	High school
17	Male	A master's degree
18	NaN	NaN
19	Male	A master's degree
20	NaN	NaN
21	Male	A bachelor's degree
22	Male	A bachelor's degree
23	Male	High school
24	NaN	NaN
25	Male	A master's degree
26	NaN	NaN
27	NaN	NaN
28	Male	A bachelor's degree
29	NaN	NaN
...
19072	NaN	NaN
19073	NaN	NaN
19074	Male	Primary/elementary school
19075	Male	A master's degree
19076	Female	High school
19077	NaN	NaN
19078	Male	A master's degree

19079	Male	High school
19080	NaN	NaN
19081	Male	A professional degree
19082	NaN	NaN
19083	Male	Some college/university study, no bachelor's d...
19084	Male	High school
19085	Male	Some college/university study, no bachelor's d...
19086	Male	A professional degree
19087	NaN	NaN
19088	Male	A bachelor's degree
19089	Male	Some college/university study, no bachelor's d...
19090	NaN	NaN
19091	Male	A master's degree
19092	NaN	NaN
19093	NaN	NaN
19094	Male	High school
19095	Male	A bachelor's degree
19096	Male	High school
19097	Male	Some college/university study, no bachelor's d...
19098	NaN	NaN
19099	NaN	NaN
19100	Male	Some college/university study, no bachelor's d...
19101	NaN	NaN

	Race	SurveyLong \
0	White or of European descent	Strongly disagree
1	White or of European descent	Somewhat agree
2	White or of European descent	Somewhat agree
3	White or of European descent	Agree
4	NaN	NaN
5	White or of European descent	Disagree
6	White or of European descent	Disagree
7	White or of European descent	Agree
8	Hispanic or Latino/Latina	Somewhat agree
9	White or of European descent	Somewhat agree
10	White or of European descent	Strongly disagree
11	NaN	NaN
12	White or of European descent	Disagree
13	Hispanic or Latino/Latina	Somewhat agree
14	White or of European descent	Somewhat agree
15	White or of European descent	Disagree
16	White or of European descent	Disagree
17	Native American, Pacific Islander, or Indigeno...	Disagree
18	NaN	NaN
19	I prefer not to say	Agree
20	NaN	NaN
21	White or of European descent	Somewhat agree
22	White or of European descent	Strongly agree

23	White or of European descent	Agree
24	NaN	NaN
25	White or of European descent	Disagree
26	NaN	NaN
27	NaN	NaN
28	White or of European descent	Somewhat agree
29	NaN	NaN
...
19072	NaN	NaN
19073	NaN	NaN
19074	White or of European descent	Agree
19075	White or of European descent	Somewhat agree
19076	White or of European descent	Somewhat agree
19077	NaN	NaN
19078	White or of European descent	Disagree
19079	White or of European descent	Somewhat agree
19080	NaN	NaN
19081	Hispanic or Latino/Latina; White or of Europea...	Disagree
19082	NaN	NaN
19083	White or of European descent	Disagree
19084	I prefer not to say	Strongly agree
19085	White or of European descent	Disagree
19086	White or of European descent	Strongly agree
19087	NaN	NaN
19088	White or of European descent	Agree
19089	White or of European descent	Disagree
19090	NaN	NaN
19091	White or of European descent	Disagree
19092	NaN	NaN
19093	NaN	NaN
19094	White or of European descent	Somewhat agree
19095	White or of European descent	Somewhat agree
19096	White or of European descent	Strongly agree
19097	White or of European descent	Somewhat agree
19098	NaN	NaN
19099	NaN	NaN
19100	White or of European descent	Somewhat agree
19101	NaN	NaN

	QuestionsInteresting	QuestionsConfusing	InterestedAnswers	Salary \
0	Strongly agree	Disagree	Strongly agree	NaN
1	Somewhat agree	Disagree	Strongly agree	NaN
2	Agree	Disagree	Agree	113750.00000
3	Agree	Somewhat agree	Strongly agree	NaN
4	NaN	NaN	NaN	NaN
5	Agree	Disagree	Agree	NaN
6	Agree	Disagree	Agree	NaN
7	Somewhat agree	Disagree	Agree	NaN

8	Strongly agree	Disagree	Strongly agree	NaN
9	Agree	Disagree	Agree	NaN
10	Agree	Strongly disagree	Strongly agree	NaN
11	NaN	NaN	NaN	NaN
12	Somewhat agree	Disagree	Agree	NaN
13	Agree	Disagree	Strongly agree	NaN
14	Agree	Disagree	Agree	100000.00000
15	Somewhat agree	Strongly disagree	Agree	NaN
16	Agree	Strongly disagree	Strongly agree	NaN
17	Agree	Disagree	Agree	130000.00000
18	NaN	NaN	NaN	82500.00000
19	Somewhat agree	Disagree	Somewhat agree	NaN
20	NaN	NaN	NaN	NaN
21	Somewhat agree	Disagree	Agree	NaN
22	Somewhat agree	Somewhat agree	Agree	100764.00000
23	Agree	Disagree	Agree	NaN
24	NaN	NaN	NaN	NaN
25	Strongly agree	Disagree	Strongly agree	175000.00000
26	NaN	NaN	NaN	NaN
27	NaN	NaN	NaN	NaN
28	Somewhat agree	Disagree	Agree	NaN
29	NaN	NaN	NaN	NaN
...
19072	NaN	NaN	NaN	NaN
19073	NaN	NaN	NaN	87500.00000
19074	Somewhat agree	Disagree	Somewhat agree	NaN
19075	Agree	Disagree	Strongly agree	NaN
19076	Somewhat agree	Disagree	Agree	NaN
19077	NaN	NaN	NaN	NaN
19078	Agree	Strongly disagree	Agree	NaN
19079	Agree	Disagree	Strongly agree	65000.00000
19080	NaN	NaN	NaN	NaN
19081	Somewhat agree	Disagree	Strongly agree	NaN
19082	NaN	NaN	NaN	NaN
19083	Agree	Disagree	Strongly agree	NaN
19084	Somewhat agree	Somewhat agree	Somewhat agree	NaN
19085	Somewhat agree	Disagree	Agree	NaN
19086	Somewhat agree	Somewhat agree	Agree	80645.16129
19087	NaN	NaN	NaN	NaN
19088	Disagree	Strongly disagree	Strongly agree	41250.00000
19089	Somewhat agree	Disagree	Agree	50500.00000
19090	NaN	NaN	NaN	NaN
19091	Agree	Somewhat agree	Strongly agree	NaN
19092	NaN	NaN	NaN	NaN
19093	NaN	NaN	NaN	NaN
19094	Disagree	Strongly disagree	Agree	NaN
19095	Somewhat agree	Disagree	Somewhat agree	NaN
19096	Somewhat agree	Somewhat agree	Somewhat agree	NaN

19097	Agree	Disagree	Agree	NaN
19098	NaN	NaN	NaN	NaN
19099	NaN	NaN	NaN	NaN
19100	Somewhat agree	Disagree	Agree	110000.00000
19101	NaN	NaN	NaN	NaN

	ExpectedSalary
--	----------------

0	NaN
1	37500.0
2	NaN
3	NaN
4	NaN
5	NaN
6	NaN
7	NaN
8	NaN
9	NaN
10	NaN
11	NaN
12	NaN
13	NaN
14	NaN
15	NaN
16	NaN
17	NaN
18	NaN
19	NaN
20	NaN
21	NaN
22	NaN
23	NaN
24	NaN
25	NaN
26	NaN
27	NaN
28	NaN
29	NaN
...	...
19072	NaN
19073	NaN
19074	NaN
19075	NaN
19076	NaN
19077	NaN
19078	NaN
19079	NaN
19080	NaN
19081	NaN

19082	NaN
19083	NaN
19084	NaN
19085	NaN
19086	NaN
19087	NaN
19088	NaN
19089	NaN
19090	NaN
19091	NaN
19092	NaN
19093	NaN
19094	NaN
19095	NaN
19096	NaN
19097	NaN
19098	NaN
19099	NaN
19100	NaN
19101	NaN

[19102 rows x 154 columns]

2.1 Question:

If two developers are sharing an office, is it okay for one of them to get a mechanical keyboard with loud "clicky" keys?

2.2 Data preparation and Data Modeling:

To answer this question I am only considering professional developers who DO NOT code for hobby but code professionally. Also, dropping rows where developers are working fully remote as they will not be impacted. Eliminating missing values from target column i.e. ClickyKeys

```
In [2]: df_ck = df[['Professional', 'ProgramHobby', 'HomeRemote', 'ClickyKeys']]
df_ck = df_ck[df_ck.Professional == "Professional developer"]
df_ck = df_ck[df_ck.ProgramHobby == 'No']
df_ck = df_ck[df.HomeRemote != r"All or almost all the time (I'm full-time remote)"]
df_ck = df_ck.dropna(subset=['ClickyKeys'])
df_ck

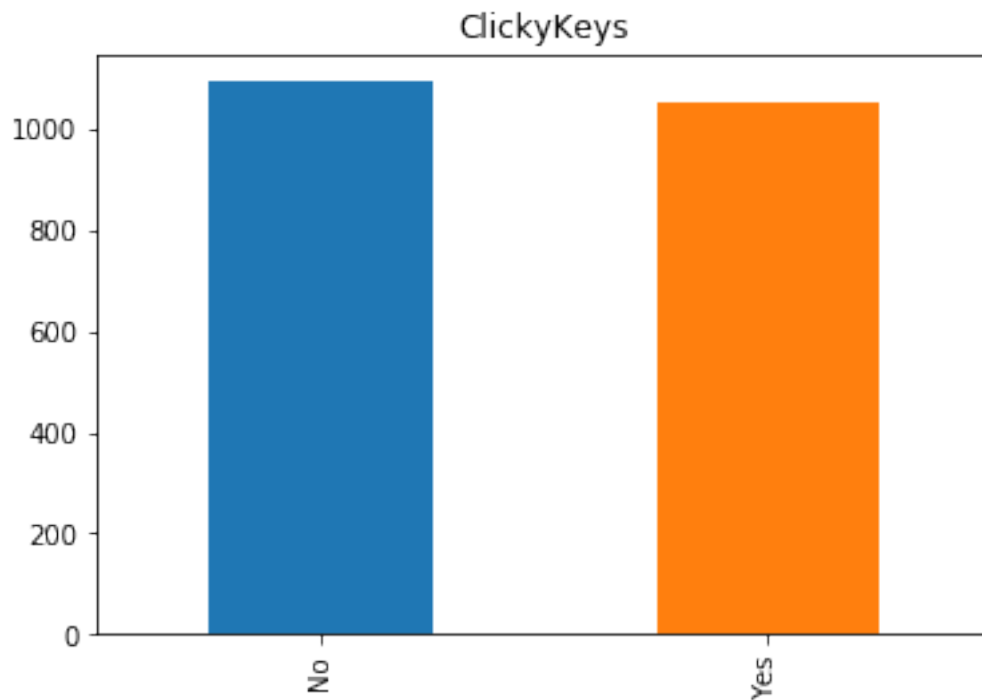
#plotting begins

x = df_ck.ClickyKeys.value_counts()

x.plot(kind="bar");
plt.title("ClickyKeys");
```



```
/opt/conda/lib/python3.6/site-packages/ipykernel_launcher.py:10: UserWarning: Boolean Series key
# Remove the CWD from sys.path while we load stuff.
```



2.3 Evaluating Results:

No, it is not okay for one of them to get a mechanical keyboard

2.4 Question - IDE:

Which development environment(s) do you use regularly?

2.5 Data Preparation and Data Modeling :

Dropping rows where IDE column has missing values

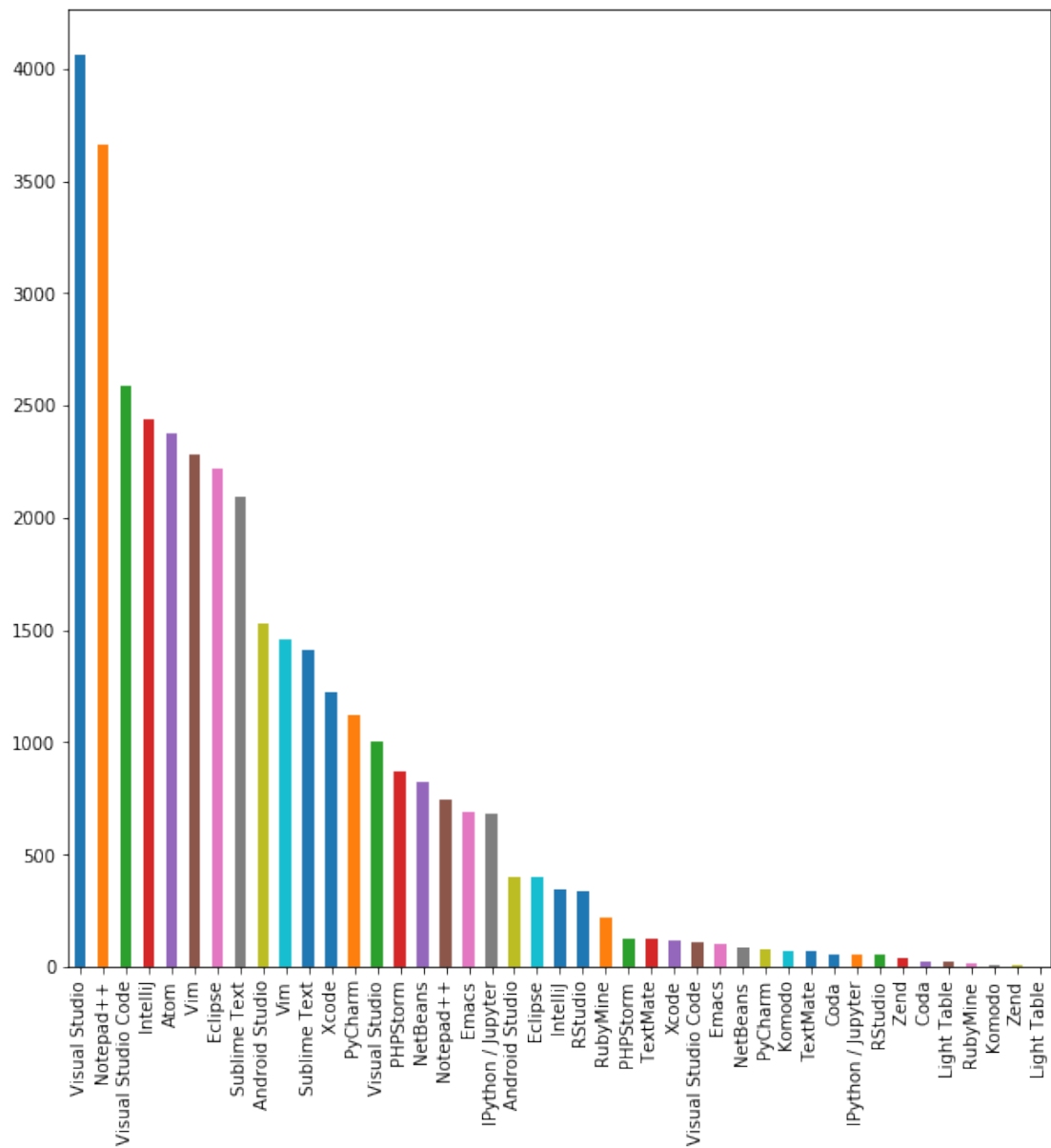
```
In [3]: df_ide = df[['IDE']]
        df_ide.dropna(subset = ['IDE'])

df_ide = df['IDE'].str.split(';', expand = True).stack().value_counts() #expand the subset

plt.figure(figsize=(10,10)) # added this since otherwise the plot is unclear and small
df_ide.plot(kind="bar")

# Answer - Visual Studio
```

Out[3]: <matplotlib.axes._subplots.AxesSubplot at 0x7f7455a28898>



2.6 Evaluating results:

Visual Studio is the development environment we use regularly

3 Assessing job industry to apply jobs in

3.1 Question -

When you're assessing potential jobs to apply to, how important are each of the following to you?
The languages, frameworks, and other technologies I'd be working with

3.2 Data Preparation and Data Modeling:

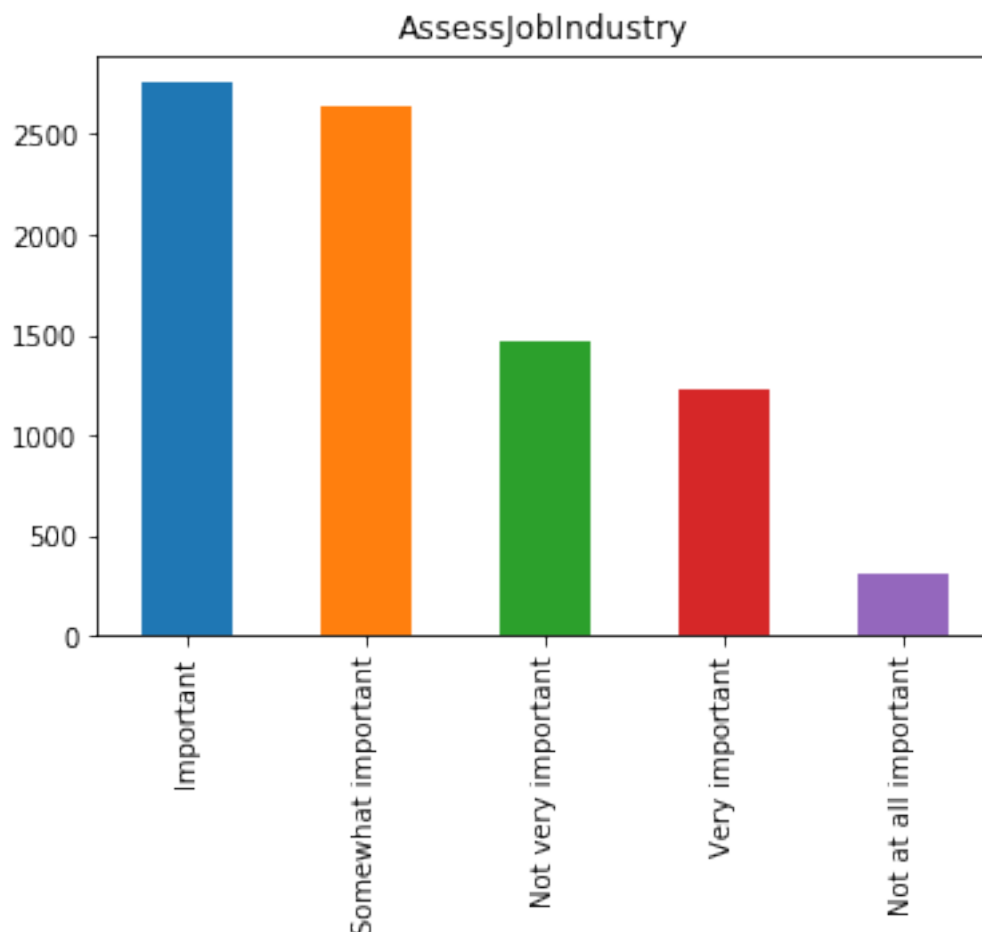
To answer this, I am considering only records where respondent has indicated that they are actively looking for a job or are open to new opportunities

```
In [9]: df_aji = df[['JobSeekingStatus', 'AssessJobIndustry']]

df_aji = df_aji[df_aji.JobSeekingStatus != r"I am not interested in new job opportunities"]
df_aji = df_aji.dropna(subset = ['JobSeekingStatus', 'AssessJobIndustry'])

df_aji_plot = df_aji.AssessJobIndustry.value_counts()

df_aji_plot.plot(kind="bar");
plt.title("AssessJobIndustry");
```



3.3 Evaluating results:

Assesing job industry while searching and applying jobs is important

In []: