Capstone Project Weekly Progress Report

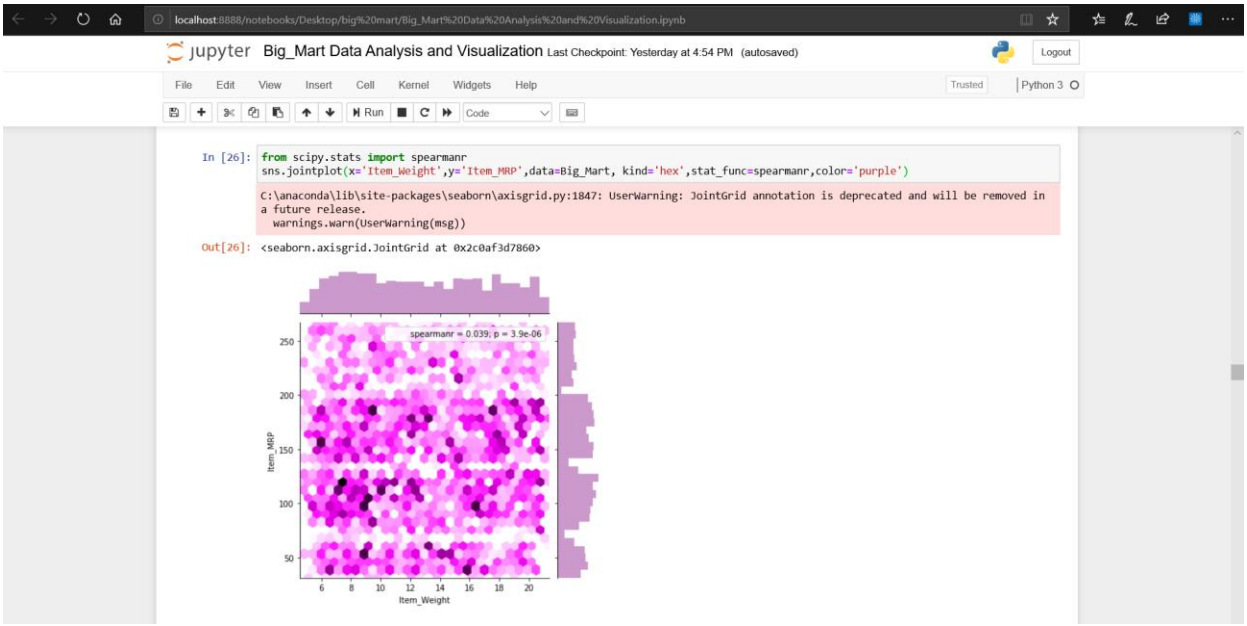
Project Title	Big_Mart Data Visualization and Analysis
Group Name	Group D
Student names/Student IDs	Avik Kundal (744823), Jasmeet Kaur (744215), Kirandeep Kaur (742276), Savreet Kaur (742785), Sukhjinder Singh (743143)
Reporting Week	3 Nov 2019 to 9 Nov 2019
Faculty Supervisor	William Pourmajidi

1. Tasks Outlined in Previous Weekly Progress Report

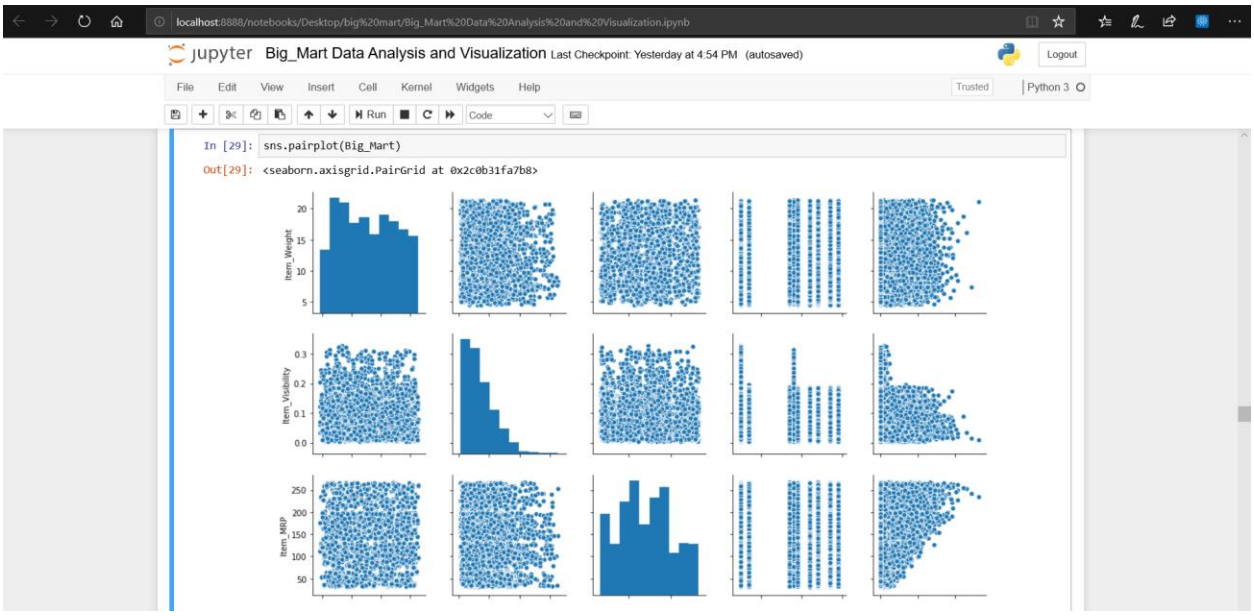
To use joint plot with spearmanr function and pair plot to find the correlation value between features and their relationships with respect to each other and to predict the customers' behaviours prevailaing in market

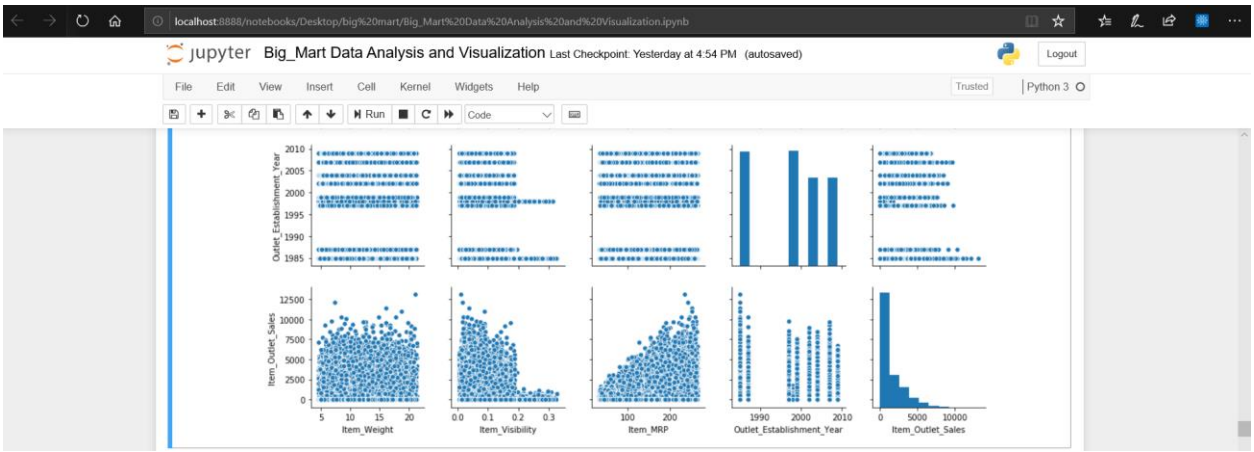
2. Progress Made in Reporting Week

- **sns.jointplot(x='Item_Weight',y='Item_MRP',data=Big_Mart, kind='hex')-Joint Plot uses Scatter Plot and Histogram.**
- **We can pass various parameters to jointplot like kind (reg, hex, kde), stat_func(spearmanr), color, size, ratio etc.**
- **Spearmanr parameter displays the correlation between two variables.**
- **Value varies between -1 and +1 with 0 implying no correlation**
- **Correlations of -1 or +1 imply an exact monotonic relationship.**
- **Positive correlations imply that as x increases, so does y.**
- **Negative correlations imply that as x increases, y decreases.**
- **from scipy.stats import spearmanr**
- **sns.jointplot(x='Item_Weight',y='Item_MRP',data=Big_Mart, kind='hex',stat_func=spearmanr,color='purple')**


localhost:8888/notebooks/Desktop/big%20mart/Big_Mart%20Data%20Analysis%20and%20Visualization.ipynb
jupyter Big_Mart Data Analysis and Visualization Last Checkpoint: Yesterday at 4:54 PM (autosaved)
Logout
File Edit View Insert Cell Kernel Widgets Help
Trusted Python 3
Run Code
In [26]: from scipy.stats import spearmanr
sns.jointplot(x='Item_Weight',y='Item_MRP',data=Big_Mart, kind='hex',stat_func=spearmanr,color='purple')
C:\anaconda\lib\site-packages\seaborn\axisgrid.py:1847: UserWarning: JointGrid annotation is deprecated and will be removed in a future release.
warnings.warn(UserWarning(msg))
Out[26]: <seaborn.axisgrid.JointGrid at 0x2c0af3d7860>
spearmanr = 0.039; p = 3.9e-06
Item_MRP
Item_Weight


localhost:8888/notebooks/Desktop/big%20mart/Big_Mart%20Data%20Analysis%20and%20Visualization.ipynb
jupyter Big_Mart Data Analysis and Visualization Last Checkpoint: Yesterday at 4:54 PM (autosaved)
Logout
File Edit View Insert Cell Kernel Widgets Help
Trusted Python 3
Run Code
In [27]: sns.jointplot(x='Item_Weight',y='Item_Outlet_Sales',data=Big_Mart, kind='hex',stat_func=spearmanr,color='pink')
Out[27]: <seaborn.axisgrid.JointGrid at 0x2c0af3e7be0>
spearmanr = 0.022; p = 0.0077
Item_Outlet_Sales
Item_Weight





3. **Difficulties Encountered in Reporting Week**
   - **We found difficult to use spearmanr function with joint plot**
   - **from scipy.stats import spearmanr - the scipy library was used to import the spearmanr function**

4. **Tasks to Be Completed in Next Week**

To use pair plot and count plot with features such as outlet_size and outlet_type to visualize the trends in market.