**Summary of findings**

1. Bar acceptance rate for those who go to bar more than 3 times per month and for those who never go to bar is about the same 18.7% v/s 18.9%. It seems that a person visiting bar more than 3 times per month reaches a saturation level which results in not accepting the coupon. This may also be driven by other factors such as income, kids, time of the day. A further analysis may give definitive picture of this.
2. If person does not go to bar frequently (less than once a month or never) and is above 25 years (in other words mature adult), has more chances of accepting the Bar coupon (about 65%), which seems to indicate that mature adults with little or no experience of going to bar, want to try out something new or something they are not used to doing frequently. This inference can be used to create similar attractive offers for people above 25 years of age.
3. People who are frequent visitors to Bar (more that once a month) and are not driving with kids are more likely to accept a Bar coupon (47.7%), which is about the same (49.7%) acceptance rate of Bar coupons frequent visitors who are not in any of the following three industries - 'farming', 'fishing', 'forestry'. A strange observation here is that not driving with kids seems to have the same effect as not working in these three industries for frequent bar visitors.
4. Acceptance rates of Bar coupons for People who are frequent visitors to Bar (more that once a month) and are not driving with kids seems to be immune to their MaritalStatus as 'Widowed'. In fact, for these drivers the given data does not have MaritalStatus as 'Widowed' and the acceptance rate is same 47.7% as in #3 above.
5. For the overall data, acceptance rate is the highest for a Sunny weather, followed by Snowy and Rainy, consistent with the intuitive approach. Not much difference between Snowy and Rainy acceptance rates though. Please see the bar-plot.
6. For the overall data, acceptance rate is the highest at 2pm and lowest at 7am, consistent with intuitive thinking. Please see the bar-plot.
7. The Jupyter notebook Assignment5\_1\_Part2.ipynb contains a similar analysis for Coffee House coupons.

Link to the Jupyter notebook: <https://github.com/pravinpowale/Berkeley-AI-ML/blob/main/Assignment%205_1.ipynb>

Link to the second Jupyter notebook (Coffee House Analysis): <https://github.com/pravinpowale/Berkeley-AI-ML/blob/main/Assignment_5_1_Part2.ipynb>

Link to README: <https://github.com/pravinpowale/Berkeley-AI-ML/blob/main/README.docx>

Link to data file: https://github.com/pravinpowale/Berkeley-AI-ML/blob/main/coupons.csv

Note: The Jupyter notebook has inline comments about the code that are self explanatory.