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Using Analytics to Devise Marketing Strategies for setting a new Business

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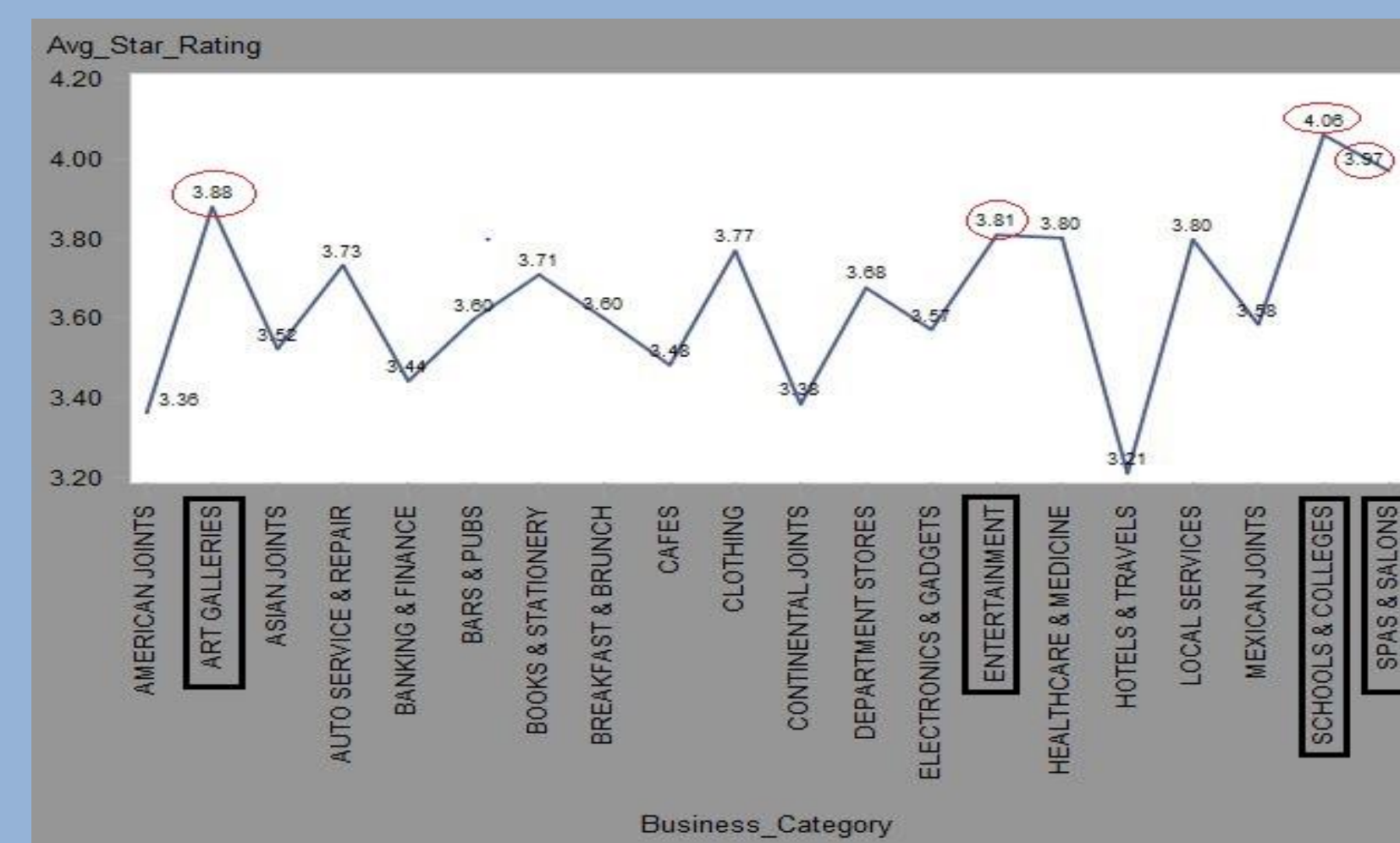
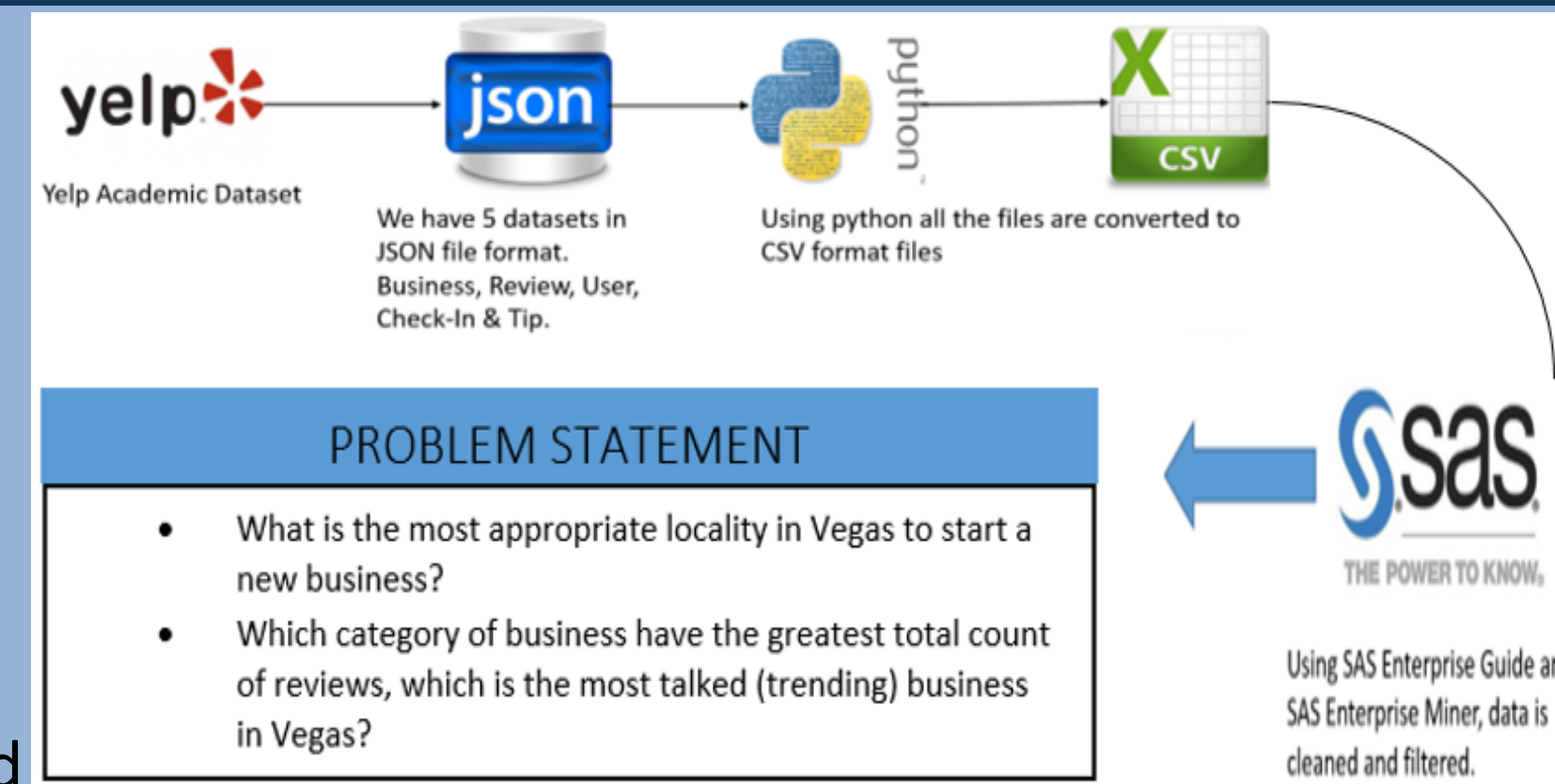
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ABSTRACT

- Someone has aptly said “Las Vegas looks the way one would imagine heaven must look at night”, and what if one gets to know the secret to run a plethora of various businesses in the entertainment capital of the world, Las Vegas.
- Finding the right Karaoke bar or a lovely Italian restaurant is not easy. Yelp, a community portal, wants to help people finding great local businesses. They cover almost everything from dentists and hair stylists through mechanics and restaurants. Yelp’s users – Yelpers – write reviews and give ratings for all kinds of businesses. Yelp then uses this data to make recommendations to the Yelpers about which institutions best fit their individual needs.
- I studied how a business runs in a locality and how the ratings and reviews tickers a business and attempt to answer the following problem statements:
 - What is the most appropriate neighborhood to start a new business (like cafe, bars etc.)?
 - Which category of business have the greatest total count of reviews, which is the most talked (trending) business in Vegas?

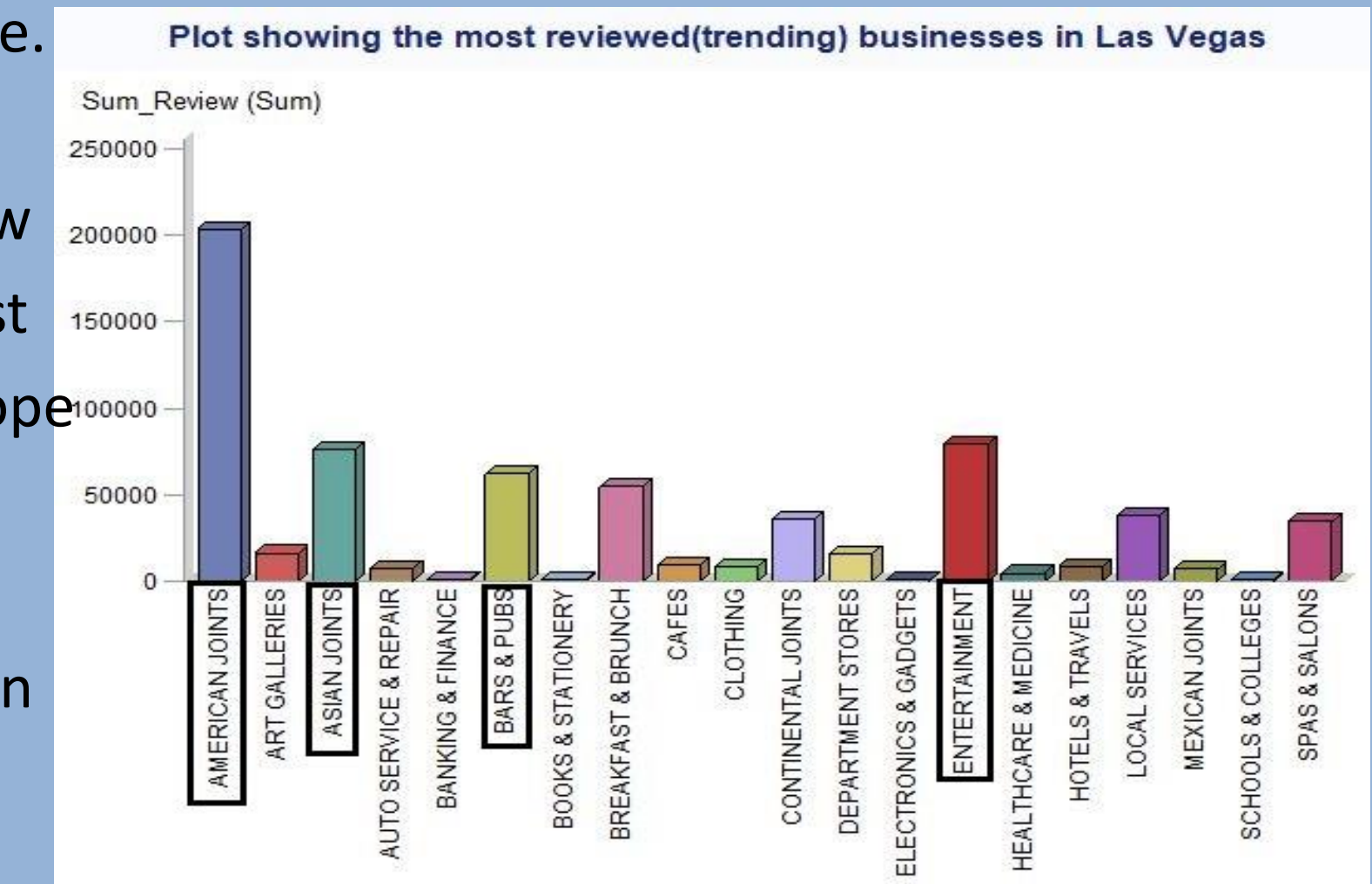
METHODOLOGY

- Figure1(top) shows the high level skeleton of the project.
- The prime focus was on the business and review datasets. All businesses in Las Vegas was categorized in to 20 categories.
- There are primarily 14 distinct localities in Las Vegas.
- Certain businesses had missing location, those values were retrieved using tree imputation depending on the latitude, longitude, business category, full address & star ratings.
- Figure2(bottom) shows all the various business categories and their average star ratings received from the users. To start a new venture, the scope was kept as the top four highly star rated business.
- To find the best locality to setup a business from each of the above selected business categories, we need to find the relation between the star ratings and a particular locality and then choose the location based on the best rating received by the business across various locality in Las Vegas.



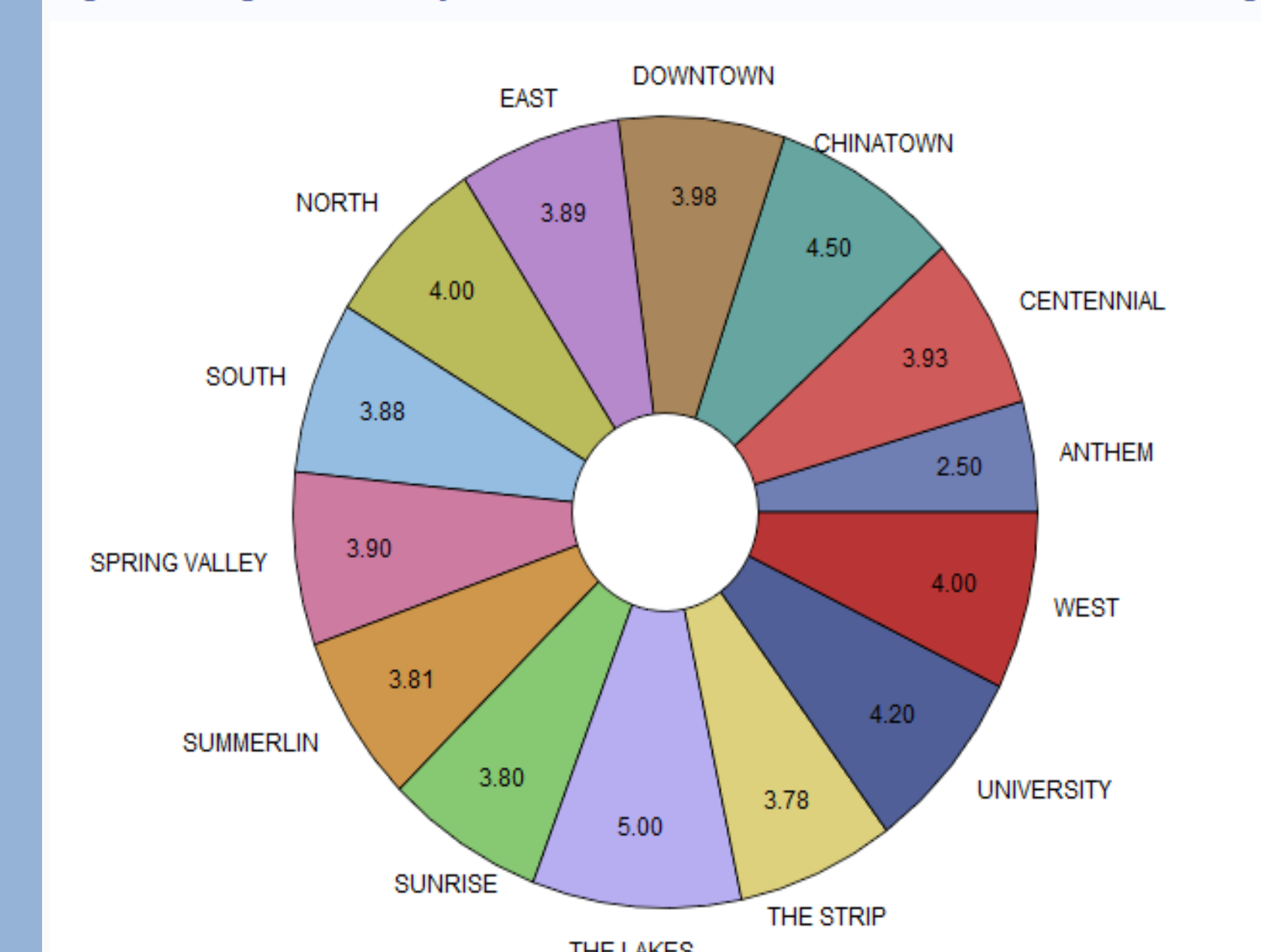
METHODOLOGY

- Figure3(right) shows all the businesses with most user reviews, i.e. the most trending business.
- Another approach to figure out the best location for setting a new business could be by finding which business is discussed the most by the users and in which locality. To start a new venture, the scope was kept as the top four trending business.
- By finding the relation between the different categories of votes, i.e. cool, funny or useful across all the business categories, we can know the authenticity of a review, and can help in improving the quality of business.

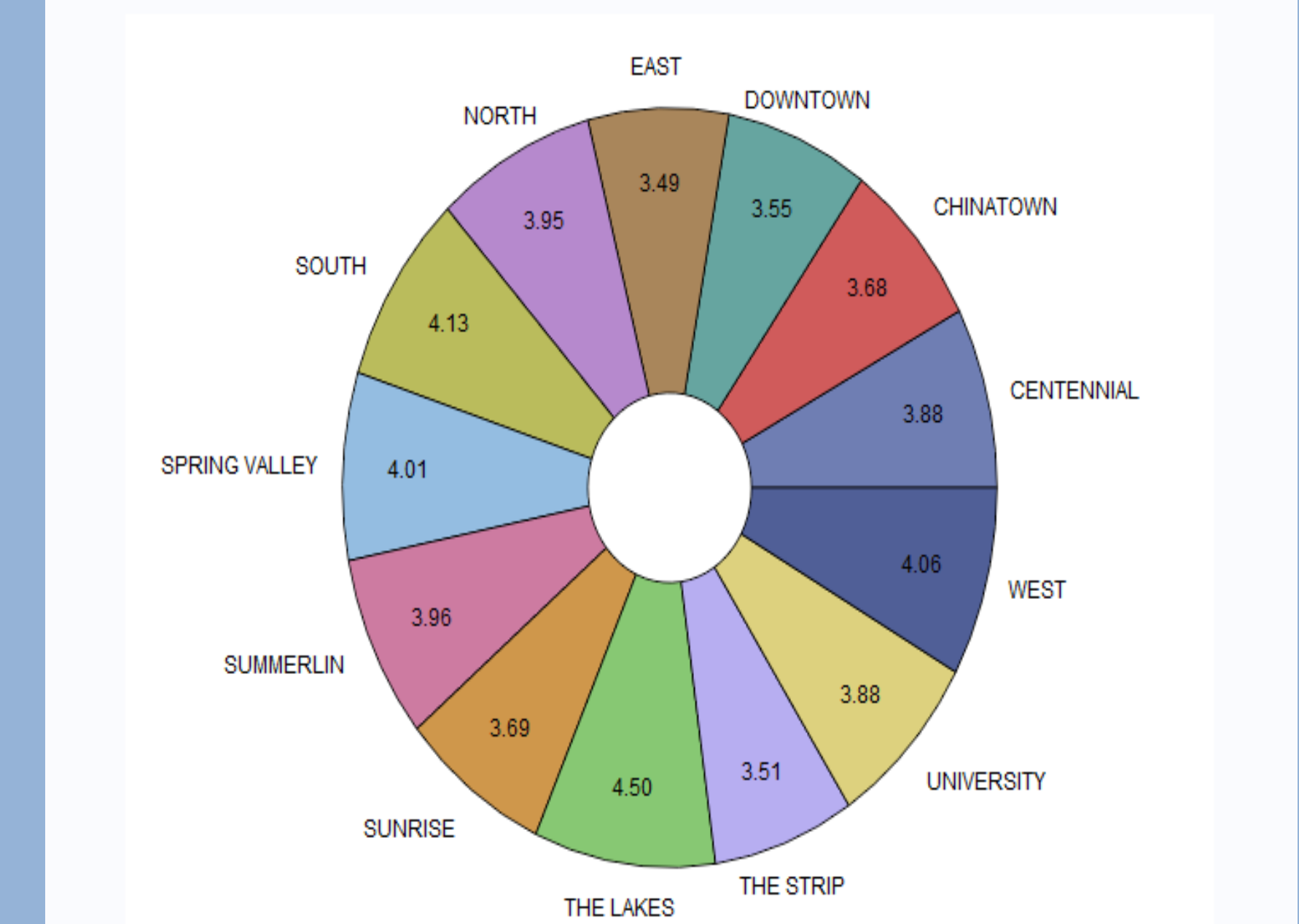


RESULTS AND CONCLUSION

Avg star ratings received by "Arts & Galleries" across various localities in Las Vegas



Avg star ratings received by "Entertainment" businesses across various localities in Las Vegas



- Figure4(left) shows the average star ratings of “Arts and Galleries” across all the major localities, thus we can say that the best places to open a new Art store/Gallery would be : The Lakes followed by Chinatown and university.
- Figure5(right) shows the average star ratings of “Entertainment” businesses across all the major localities, thus we can say that the best places to open a new Entertainment business would be : The Lakes followed by South, West and Spring Valley.

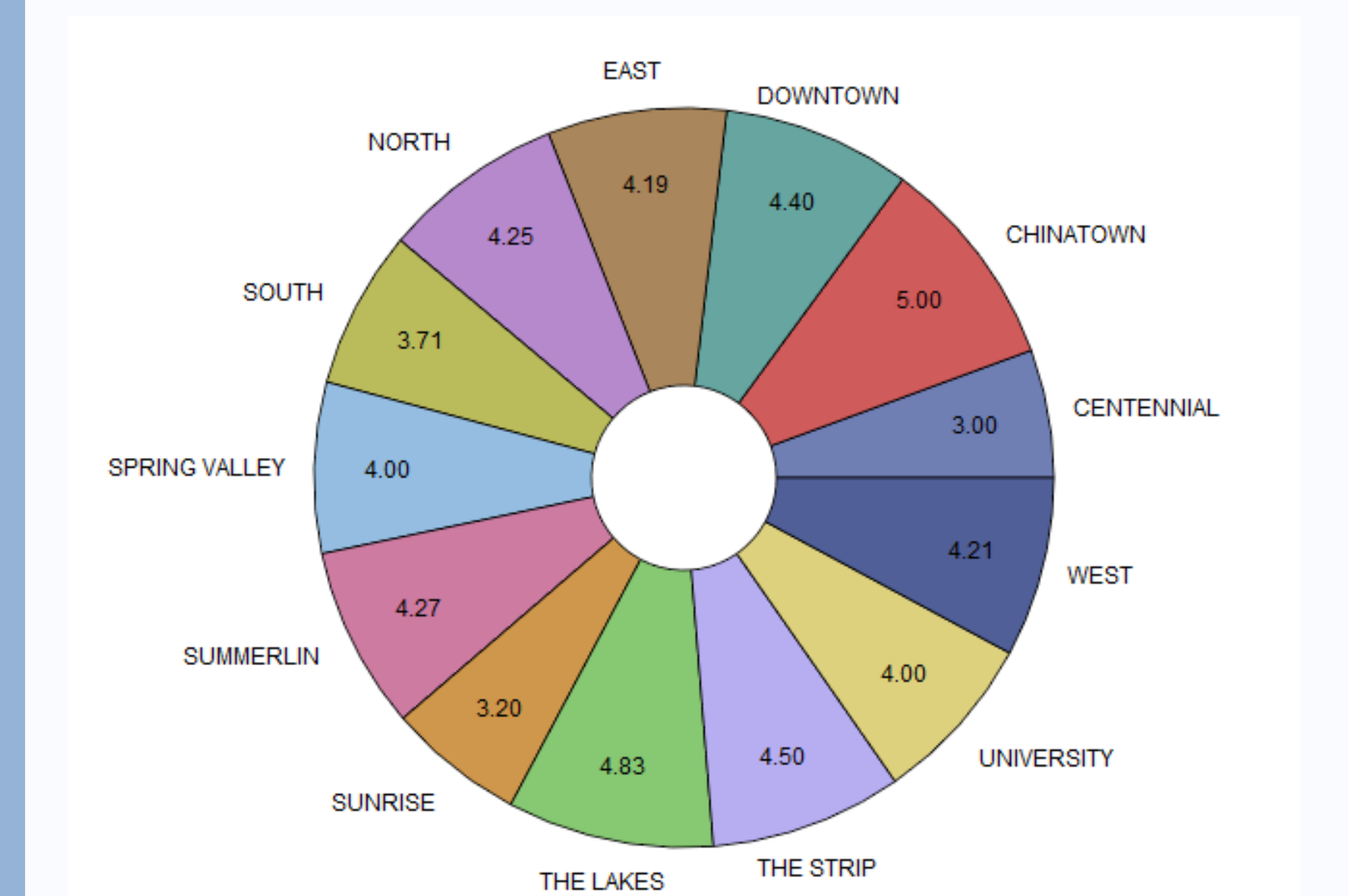
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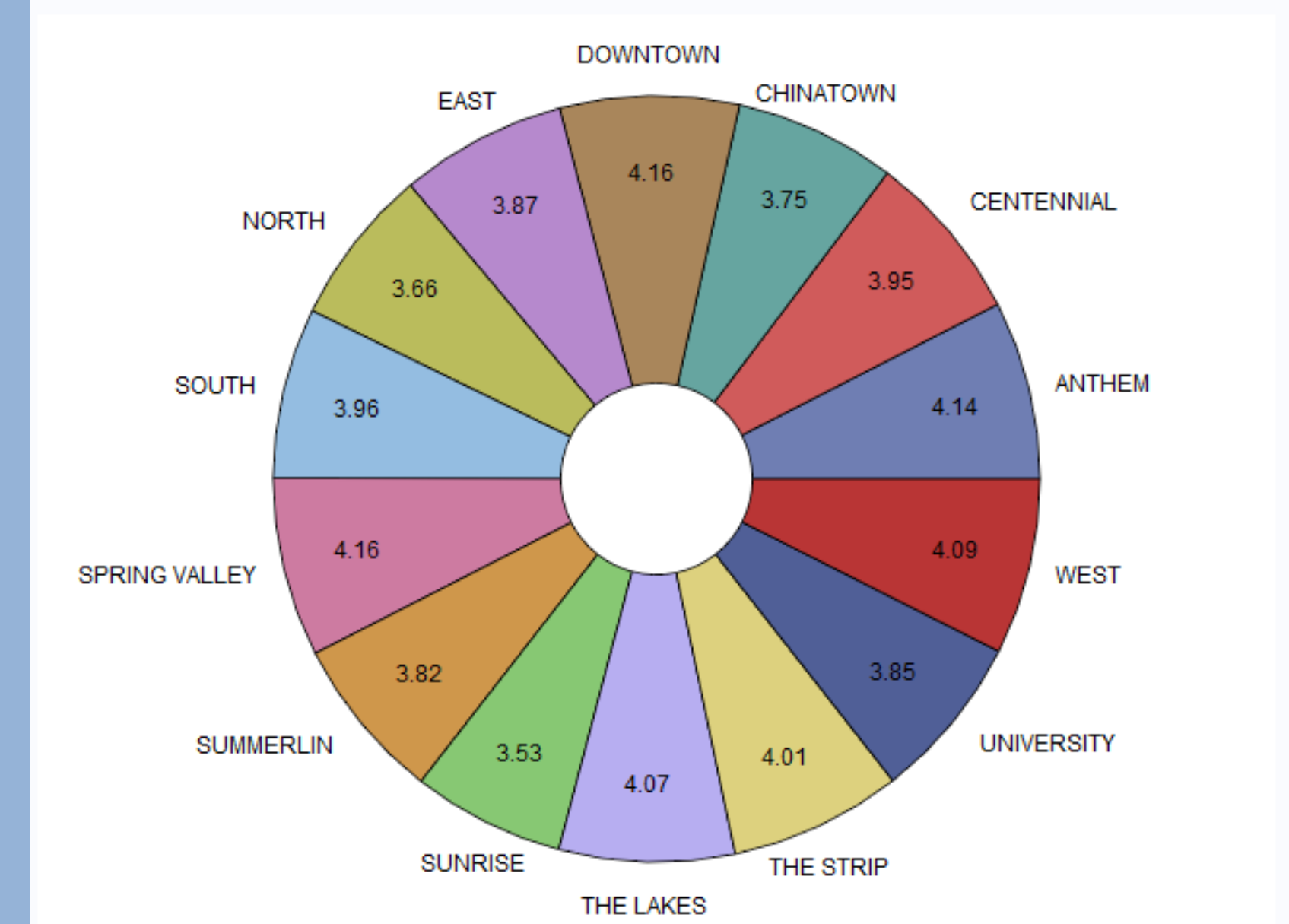
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RESULTS & CONCLUSION (CONTINUED)

Avg star ratings received by "Schools & Colleges" across various localities in Las Vegas



Avg star ratings received by "Spas & Salons" across various localities in Las Vegas



- Figure6(left) shows the average star ratings of "Schools & Colleges" across all the major localities, thus we can say that the best places to open a new School/College would be : Chinatown followed by The Lakes and The Strip.
- Figure7(right) shows the average star ratings of "Spas & Salons" businesses across all the major localities, thus we can say that the best places to open a new Spa/Salon would be : Downtown followed by Spring Valley and Anthem.
- Now that we know , which places would be the best to open a new business, we need to see the presence of similar ventures in a particular location and then it would be a managerial decision if a highly rated location with excessive similar businesses would be better or a location with slightly less rating but with minimal competition.

Number of "Art Galleries" across different locations

Imputed LOCALITY	N Obs
ANTHEM	1
CENTENNIAL	7
CHINATOWN	6
DOWNTOWN	88
EAST	54
NORTH	12
SOUTH	52
SPRING VALLEY	49
SUMMERLIN	31
SUNRISE	5
THE LAKES	1
THE STRIP	206
UNIVERSITY	5
WEST	47

Number of Entertainment businesses across different locations

Imputed LOCALITY	N Obs
CENTENNIAL	24
CHINATOWN	19
DOWNTOWN	98
EAST	68
NORTH	55
SOUTH	123
SPRING VALLEY	136
SUMMERLIN	92
SUNRISE	26
THE LAKES	2
THE STRIP	196
UNIVERSITY	4
WEST	70

Number of Schools/Colleges across different locations

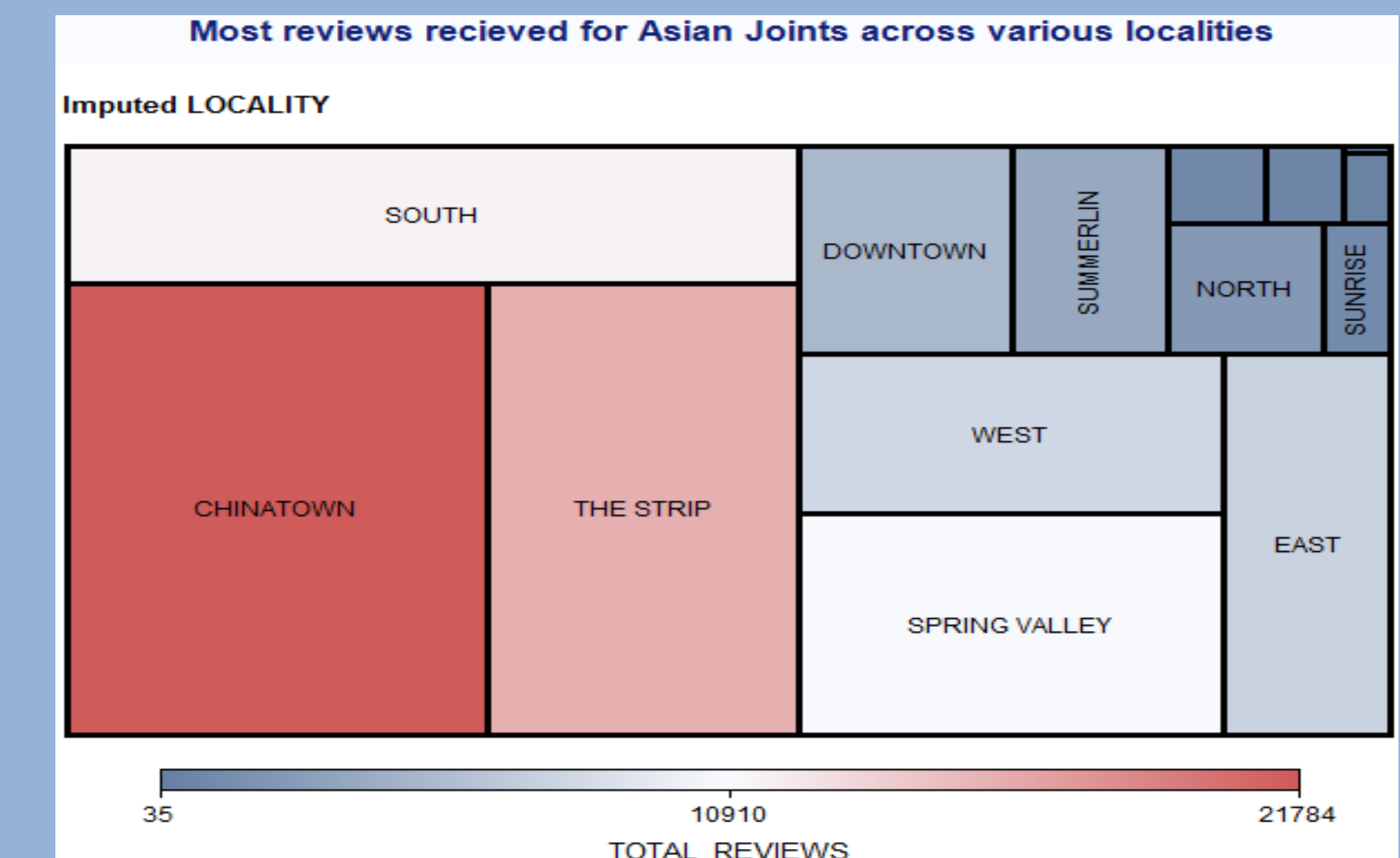
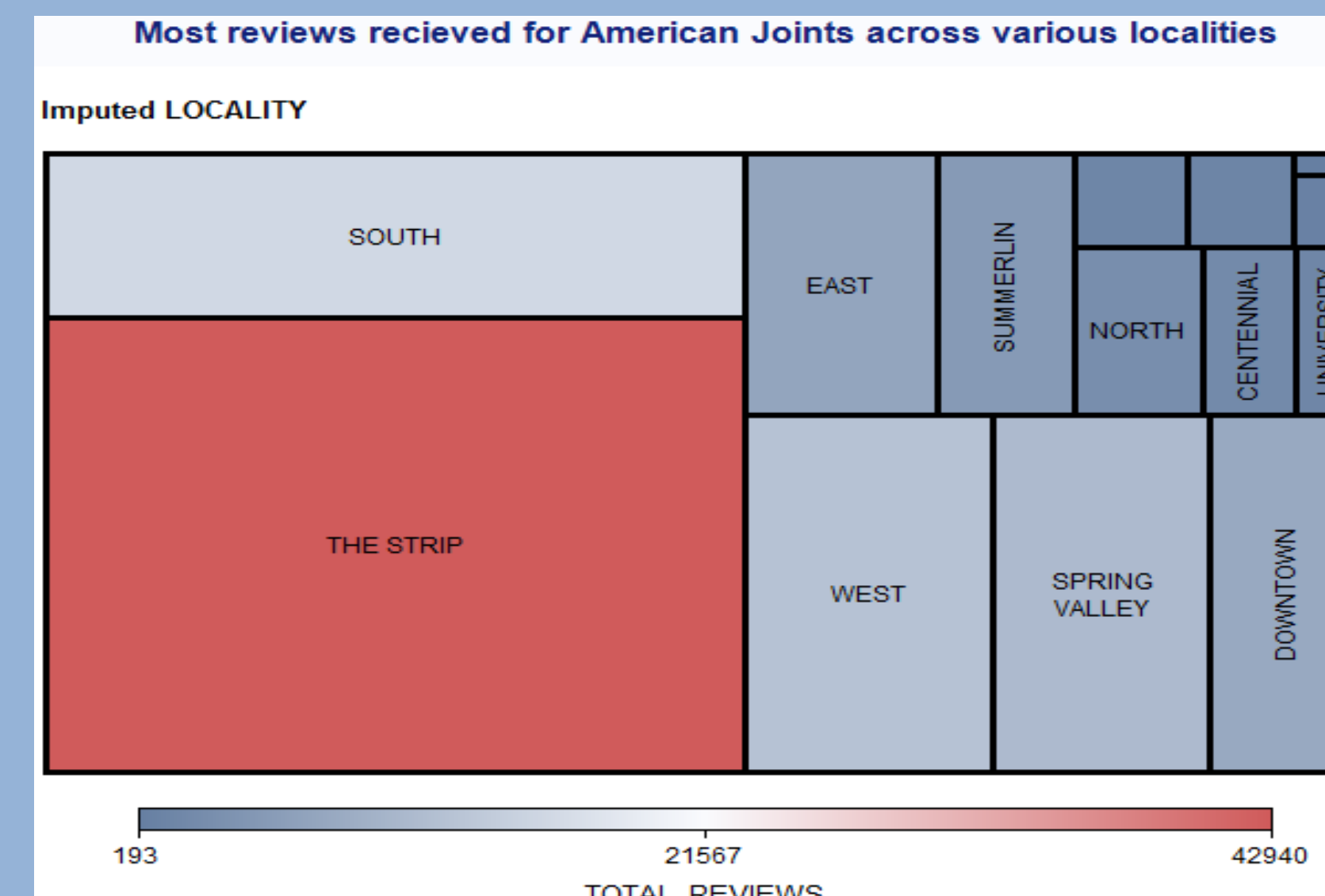
Imputed LOCALITY	N Obs
CENTENNIAL	4
CHINATOWN	1
DOWNTOWN	5
EAST	8
NORTH	10
SOUTH	12
SPRING VALLEY	9
SUMMERLIN	11
SUNRISE	5
THE LAKES	3
THE STRIP	3
UNIVERSITY	3
WEST	12

Number of Spas/Salons across different locations

Imputed LOCALITY	N Obs
ANTHEM	7
CENTENNIAL	61
CHINATOWN	57
DOWNTOWN	58
EAST	81
NORTH	94
SOUTH	224
SPRING VALLEY	271
SUMMERLIN	107
SUNRISE	45
THE LAKES	7
THE STRIP	86
UNIVERSITY	10
WEST	175

RESULTS & CONCLUSION (CONTINUED)

- Another approach of setting a new business could be, by knowing the most trending business in a particular area. i.e. the reviews received by each business categories. The locality with the highest user reviews of a business venture would most likely attract the highest customers.
- We can also look at the individual counts of each business in a locality and then decide strategically, if there is an over abundance of any business in an area, there we might as well select the next most talked business.



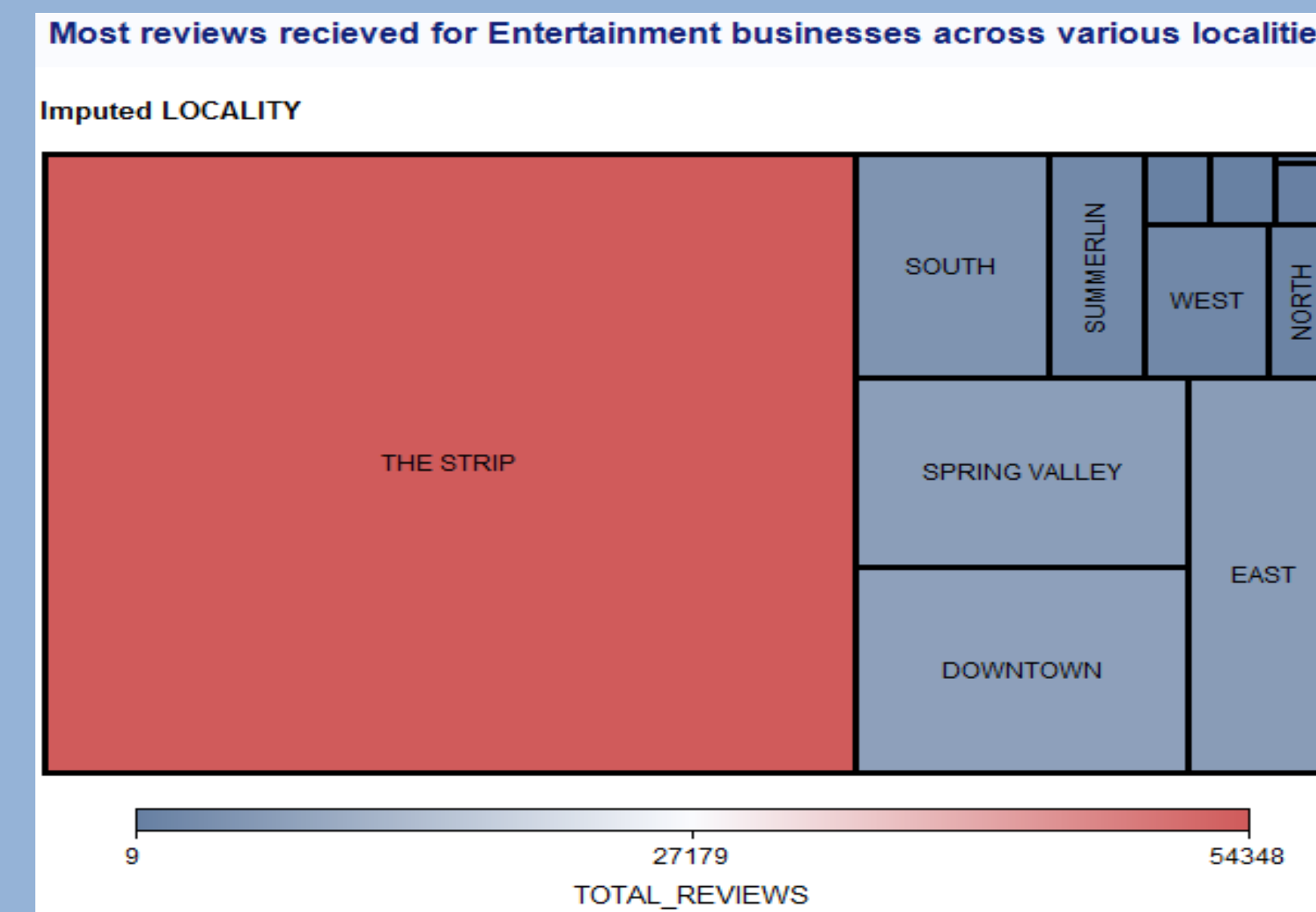
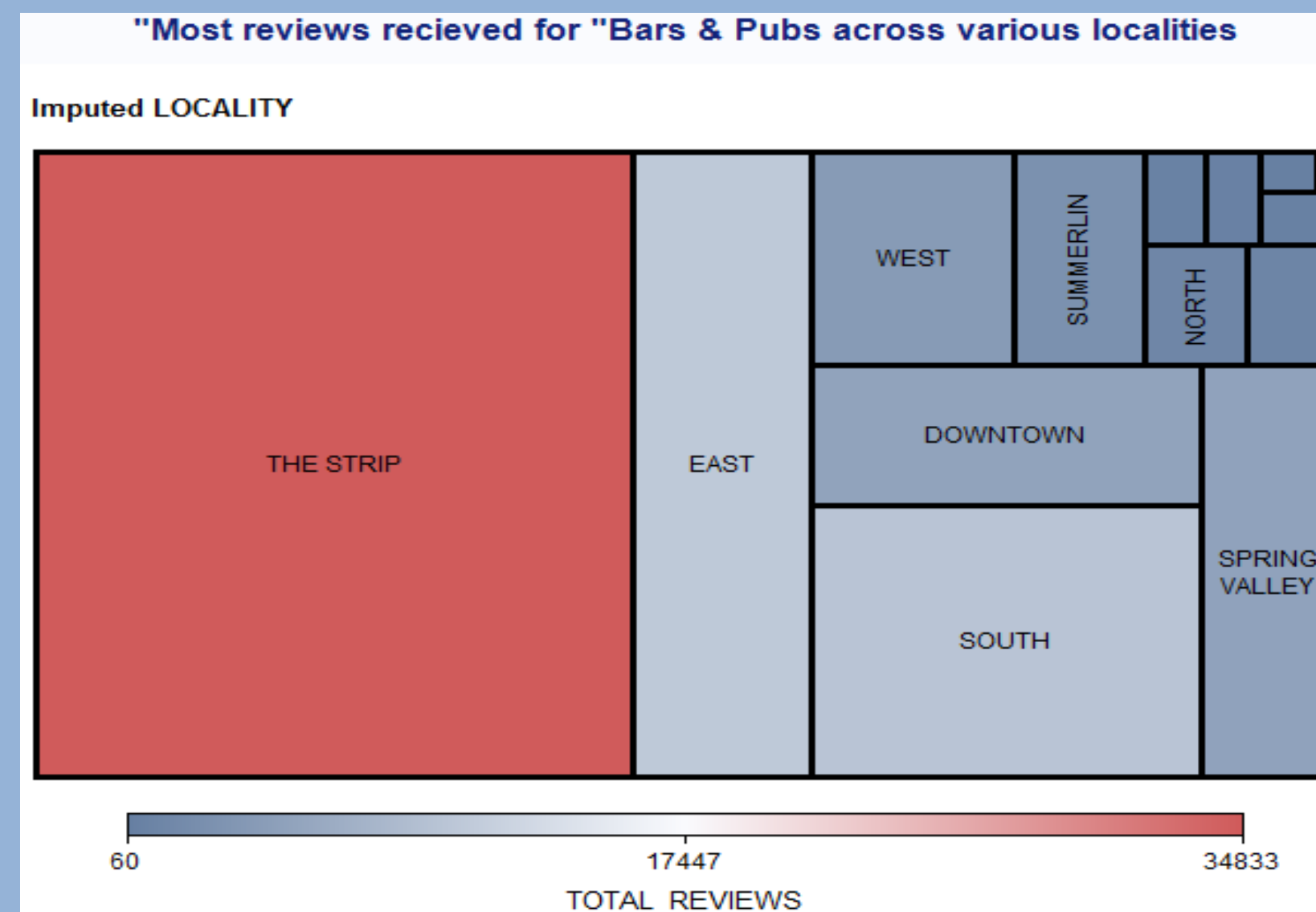
- The Tile chart shows the distribution of number of user reviews received by a particular business category over different localities. The size of each tile varies proportionally with the count of user reviews.
- American Joints are the hot cakes, the most discussed business by the users and the plot, figure8(top left) shows that best places to open an American Joint would be : The Strip followed by South and West.
- Asian Joints are the second most discussed business by the users and the plot, figure9(top right) shows that best places to open an Asian Joint would be : Chinatown followed by The Strip and South.

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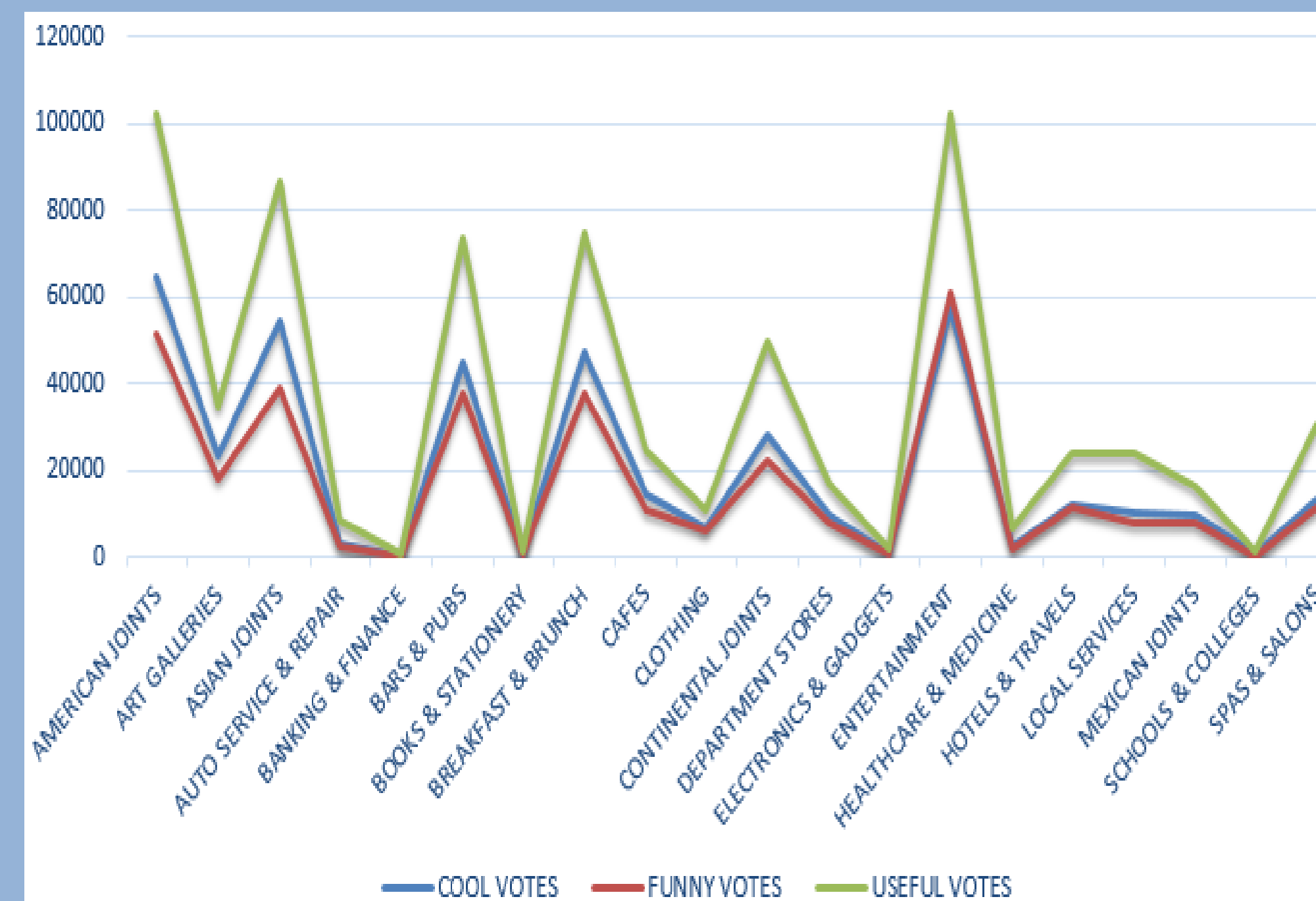
RESULTS CONTINUED



- For setting new Bars & Pubs, figure10(top left) shows that best places to open a bar/pub would be : The Strip followed by East and South.
- For setting any entertainment business, figur11(top right) shows that best places to open an entertainment business would be : The Strip followed by Downtown and Spring Valley.

• The line chart figur12(right) compares the total votes received by a business category . There are three different class of votes namely

- Cool Votes: Depicts the ambience and style of the business.
- Funny Votes: how amiable a business is with a customer.
- Useful Votes: how reliable is a business amongst the users.



FUTURE WORK, ACKNOWLEDGEMENT & REFERENCES

FUTURE WORK:

- The scope of this project can be easily extended to gather and interpret data with the additional businesses over time across other major cities .
- So far we have been dealing with the average rating and the trending businesses across various localities in Las Vegas, we can further use text mining on user reviews so as to get much more insights about how any business is actually fairing and is being accepted by a user.
- A user who had a decent experience with any business might give an average rating, but understanding his/her review comments makes more sense on how good or bad experience he/she had.

ACKNOWLEDGEMENTS:

- I heartily thank Dr. Goutam Chakraborty, Professor, Department of Marketing and founder of SAS and OSU Data Mining Certificate program, Director MS in Business Analytics – Oklahoma State University for his constant inputs and guidance without which I couldn't have done this research project.
- I thank Dr. Miriam McGaugh, Director, Oklahoma State Department of Health for her support throughout the research as well as helping me with the understanding of the data.

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