

Project Plan

Joshua Afleje, Nicole Feil, Andrew Liu, and Jack Oebker

Arizona State University, Tempe, AZ 85281, USA

February 20, 2025

1 Background

1.1 Business Summary Visualization with Generative Models

1.2 Understanding the Impact of Location, Population Density, etc. on Business Success

1.3 Predict Business Closure and Understanding What Can Lead to It

1.4 Understand What Events Will Spike Sentiment Change

1.5 Understand Common Complaints about Each Industry/Category of Business

2 Datasets

3 EDA

4 Methodologies

References

- Aziz, K., Ji, D., Chakrabarti, P., Chakrabarti, T., Iqbal, M. S., and Abbasi, R. (2024). Unifying aspect-based sentiment analysis bert and multi-layered graph convolutional networks for comprehensive sentiment dissection. *Scientific Reports*, 14:14646.
- Chen, Y. and Lee, S. (2024). User-generated physician ratings and their effects on patients’ physician choices: Evidence from yelp. *Journal of Marketing*, 88(1):77–96.
- Hu, M. and Liu, B. (2004). Mining and summarizing customer reviews. In *Proceedings of the 10th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD ’04)*, pages 168–177, New York, NY, USA. ACM.
- Keller, D. and Kostromitina, A. (2020). Characterizing non-chain restaurants’ yelp star ratings: Generalizable findings from a representative sample of yelp reviews. *International Journal of Hospitality Management*, 86:102440.
- Liang, Y. (2018). Yelp rating prediction with sentiment and topic models. *North Carolina Libraries*, 76(1):33–40.
- Liu, S. (2020). Sentiment analysis of yelp reviews: A comparison of techniques and models. *arXiv preprint*, arXiv:2004.13851.
- Mukherjee, A., Venkataraman, V., Liu, B., and Glance, N. (2021). What yelp fake review filter might be doing? In *Proceedings of the International AAAI Conference on Web and Social Media*, volume 7, pages 409–418. AAAI Press.
- Olson, A. W., Calderón-Figueroa, F., Bidian, O., Silver, D., and Sanner, S. (2021). Reading the city through its neighbourhoods: Deep text embeddings of yelp reviews as a basis for determining similarity and change. *Cities*, 110:103045.
- Rahimi, S., Mottahedi, S., and Liu, X. (2018). The geography of taste: using yelp to study urban culture. *ISPRS International Journal of Geo-Information*, 7(9):376.
- ReviewTrackers (2025). Customer reviews statistics and trends.