# **Topic Modeling using Latent Dirichlet Allocation**

#### **Hannah Chen**

## Sonali Rahagude

hechen@eng.ucsd.edu

srahagud@ucsd.edu

Sneha Venkatesh Yelimeli

Chun Fan

Yashodhan Karandikar

svyelime@eng.ucsd.edu

c9fan@ucsd.edu

ykarandi@eng.ucsd.edu

#### **Abstract**

- 1 Introduction
- 2 Background
- 3 Design
- 4 Results
- 5 Conclusions
- A Appendix

## References

- [1] Charles Elkan. Clustering documents with an exponential-family approximation of the dirichlet compound multinomial distribution. In *Proceedings of the 23rd international conference on Machine learning*, pages 289–296. ACM, 2006.
- [2] David M. Blei, Andrew Y. Ng, and Michael I. Jordan. Latent dirichlet allocation. *Journal of Machine Learning Research*, 3:993–1022, 2003.
- [3] Lindsay I Smith. A tutorial on principal components analysis. *Cornell University, USA*, 51:52, 2002.
- [4] Gregor Heinrich, Jörg Kindermann, Codrina Lauth, Gerhard Paaß, and Javier Sanchez-Monzon. Investigating word correlation at different scopes—a latent concept approach. In *Workshop Lexical Ontology Learning at Int. Conf. Mach. Learning*, 2005.
- [5] Marina Meilă. Comparing clusterings—an information based distance. *Journal of Multivariate Analysis*, 98(5):873–895, 2007.
- [6] Gregor Heinrich. Parameter estimation for text analysis. Technical report, 2004.