Formatting instructions for NIPS 2016

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Abstract

The abstract paragraph should be indented ½ inch (3 picas) on both the left- and right-hand margins. Use 10 point type, with a vertical spacing (leading) of 11 points. The word **Abstract** must be centered, bold, and in point size 12. Two line spaces precede the abstract. The abstract must be limited to one paragraph.

1   Introduction

Quantitative analysis of legislative data has the potential to provide new insights into how our government functions. Political scientists often focus on voting records of legislators on the suite of bills introduced during their term in congress. Indeed, even simple matrix factorizations and examination of prinicple components of roll call data are able to uncover the political tendencies of individual representatives (figures).

Another commonly utility of roll call vote data is to conduct *ideal point modeling*. Here, a congressman and a bill is presumed to lie in a latent ''ideoloigcal space,'' where the probability of a "yay" or "nay" response is a function of the bill's position and the congressman's position. The congressman's position is known as an ''ideal point'' because his or her utility decreases as a bill's position deviates from this point. One example of ideal point modeling in roll call data can be found in Gerrish and Blei 2011 where they assumed that ideal points lay in a one dimensionsal latent space; in this paper, we examine their results when we extend to higher dimensional (two?) ideological spaces.

In addition to a senator's latent ideology, we furthur posit that the senators belong in latent communities. Using stochastic block modeling......

2   The model

2.1   Ideal Point Model

2.2   Stochastic Block Model

3   Results

4   Discussion

References

[1] Gerrish, S.M. & Blei, M.B. (2011) Predicting Legislative Roll Calls from Text. *Proceedings of the 28th International Conference on Machine Learning*

A Variational updates