



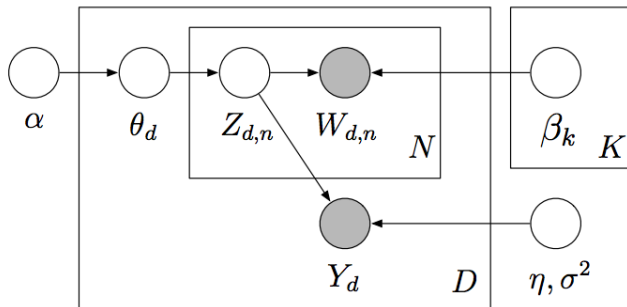
## Supervised Topic Models

Advanced Machine Learning for NLP

Jordan Boyd-Graber

OVERVIEW

## Single Language: Supervised LDA



- Normal LDA generative story
- Document also has label  $y_d$

$$y_d \sim \mathcal{N}(y_d, \eta^\top \mathbb{E}_\theta[\bar{Z}], \sigma^2) \quad (1)$$

## How does this change the topics?

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## SLDA topics

