

# What You Should Know

- What is a mixture language model, particularly mixture of unigram language model?
- What is the general form of the likelihood function of a mixture model?
- Why can the two-component mixture model with a background component language model factor out common words?
- What is PLSA and how does it work?
- How does EM algorithm work for PLSA?
- Why do we want to add a prior to PLSA and how can we modify the EM algorithm to incorporate a conjugate prior?
- Why is contextual topic modeling interesting? Can you give multiple examples of applications of contextual topic modeling?