**Instruction:** Please refer to references that I uploaded in the “content” section. You should submit both hard and soft copies until the due date. Late submission will not be accepted.

**Due date:** March 28th, 2018 (hard copy on the beginning of the 28th class, soft copy until midnight on 28th on BB)

**Assignment 2: Probabilistic Latent Semantic Analysis (PLSA)**

1. **Derive PLSA (please handwritten).**
2. **Implement your own PLSA algorithm on your data** (it would be better if the data is aligned with your final project, but not a must).
   1. Please write your own code without using PLSA functions provided by some packages (don’t use the function such as output = PLSA(input), but you can utilize basic functions of packages such as generating random numbers when you write your own code. You can also refer to how PLSA functions which are already provided by some packages look like).
   2. Please describe values that you set for (# of topics) and (probability of background topic).
   3. Please terminate your algorithm when the increase of likelihood is less than 0.0001 or when the iteration number reaches 100 (1st E&M, 2nd E&M, …., 100th E&M).
   4. Please show the first three iterations and the last three iterations respectively like the example in our class material.