



CS 68: BIOINFORMATICS

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Swarthmore College
Spring 2018



Outline: Apr 12 (in lab notes)

- Introduce Lab 9
- Final project notes
- Lab 8 tips

Lab 8 tips

Part 1:

- For backward probabilities, make sure to initialize **last column to 0** (i.e. 1 in log-space)
- For all algorithms, loop over **columns** of table first (need entire previous column)
- For all algorithms, in log-space: ***** becomes **+** and **+** becomes **log_add(...)**
- For the **posterior table**, you can convert to non-log space right away since the columns sum to 1 (i.e. they are not that small)

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Part 2:

- When updating the **emission probabilities** in Baum-Welch, you can assume there are only two states (0 & 1), so you can compute the probability of emitting a 0, then take 1 minus that (in non-log space) for the probability of emitting a 1. Then convert back to log-space
- To update the **initial state probabilities** in Baum-Welch, just use the first column of the posterior table

Midterm 2 & Final Project Timeline

- Monday April 16 in class: midterm 2 review session
- Thursday April 19 in lab: midterm 2
- Monday April 23: final project proposal due (earlier is better though!)
- April 23 – May 17: work on projects (in-lab project meetings for the last two lab times)
- Thursday May 17, 2-5pm: project presentations
- Thursday May 17, 10pm: all project code, slides, and lab notebooks due

Email me

- If you would like to work alone
- If you would like to work in a group of 3 (must also provide a workload division)
- If you would like to meet to talk about options