

# CS 3824

## Homework Assignment 3

**Given:** September 17, 2014

**Due:** October 11, 2014

**General directions.** The point value of each problem is shown in [ ]. Each solution must include all details and an explanation of why the given solution is correct. In particular, write complete sentences. A correct answer without an explanation is worth no credit. The completed assignment must be turned in as a PDF through Scholar by 5:00 PM on October 11, 2014. **No late homework will be accepted.**

**Digital preparation of your solutions is mandatory.** Use of  $\LaTeX$  is optional, but encouraged. No matter how you prepare your homework, **please include your name.**

**Use of  $\LaTeX$  (optional, but encouraged).**

- Retrieve this  $\LaTeX$  source file, named `homework3.tex`, from the course web site.
  - Rename the file `<Your VT PID>_solvehw3.tex`, For example, for the instructor, the file name would be `heath_solvehw3.tex`.
  - Use a **text editor** (such as `vi`, `emacs`, or `pico`) to accomplish the next three steps.
  - Uncomment the line  

```
% \setboolean{solutions}{True}
```

in the document preamble by deleting the %.
  - Find the line  

```
\renewcommand{\author}{Lenwood S. Heath}
```

and replace the instructor's name with your name.
  - Enter your solutions where you find the  $\LaTeX$  comments  

```
% PUT YOUR SOLUTION HERE
```
  - Convert your solutions to PDF and submit your solutions through Scholar by 5:00 PM on October 11, 2014.
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	0	1	2	3	4	5	6	7	8	9
		G	G	A	C	G	T	A	C	G
0										
1 T										
2 A										
3 C										
4 G										
5 G										
6 G										
7 T										
8 A										
9 T										

Figure 1: L<sup>A</sup>T<sub>E</sub>X template for dynamic programming in second problem.

**[50] 1. Jones and Pevzner problem 6.20.**

Only do the first two bullets. Figure 1 contains a L<sup>A</sup>T<sub>E</sub>X template to fill in twice, once for the first bullet and once for the second bullet.

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**[50] 2. Jones and Pevzner problem 6.32.**

Follow the dynamic programming paradigm. Give pseudocode for the resulting algorithm.

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