

## CS320 Honors Option Report

Week	Completed
1	NA
2	<ul style="list-style-type: none"><li>- Meet with Sanjay about the options of doing an honors option</li><li>- Considered the options discussed with Sanjay<ul style="list-style-type: none"><li>- Undergrad research regarding RNA folding</li><li>- Read/study additional chapters in the class textbook</li><li>- Any other personal projects related to the class material</li></ul></li></ul>
3	<ul style="list-style-type: none"><li>- Meet with Sanjay about which option will be taken on for the completion of the honors option for CS320<ul style="list-style-type: none"><li>- Decided on the option to Read/study additional chapters in the class textbook</li></ul></li><li>- Find a time to schedule biweekly meetings</li></ul>
4	<ul style="list-style-type: none"><li>- Found a time to meet biweekly with Sanjay and a fellow student<ul style="list-style-type: none"><li>- Wait till first biweekly meeting for further instruction</li></ul></li><li>- Read Chapter 7, specifically focusing on sections 7.1 and 7.2</li></ul>
5	<ul style="list-style-type: none"><li>- First biweekly meeting discussing chapter 7</li><li>- Read chapter 9 intro and section 9.1</li></ul>
6	<ul style="list-style-type: none"><li>- Read section 9.2</li></ul>
7	<ul style="list-style-type: none"><li>- Unable to attend the Biweekly Meeting</li><li>- Continued looking at exercise 9.3-9 with the intent to study it with the algorithm from 9.2</li></ul>
8	<ul style="list-style-type: none"><li>- Tried to further understand how to complete exercise 9.3-9 through the algorithm from 9.2</li></ul>
9	<ul style="list-style-type: none"><li>- Biweekly Meeting canceled due to a lecture</li><li>- Read chapter 9.3</li></ul>
10	<ul style="list-style-type: none"><li>- Studied and began analysis of the SELECTION algorithm in 9.3</li></ul>
11	<ul style="list-style-type: none"><li>- Biweekly Meeting</li><li>- Began implementing the SELECTION algorithm in 9.3 into a python program</li></ul>

12	<ul style="list-style-type: none"> <li>- Completed the 9.3 SELECTION algorithm in python</li> </ul>
13	<ul style="list-style-type: none"> <li>- Biweekly Meeting</li> <li>- Began writing up the report on progress made each week throughout this process</li> <li>- Read and began trying to understand why the SELECTION algorithm in worst-case uses '5' and not other numbers</li> </ul>
14	<p>Fall Recess</p> <ul style="list-style-type: none"> <li>- Tried to study and do more analysis of why the SELECTION algorithm uses 5 in the worst-case run time</li> <li>- Went back to python program that implemented SELECTION to add comments and try to understand the algorithm further</li> </ul>
15	<ul style="list-style-type: none"> <li>- Biweekly Meeting</li> <li>- Tried to further analyze SELECT algorithm using 3 and 7 through the methods we did in the biweekly meeting</li> </ul>
16	<ul style="list-style-type: none"> <li>- Final Meeting</li> <li>- Worked on converting the python program to a Jupyter notebook</li> <li>- Attempted to prove the SELECTION algorithm by induction</li> </ul>
17	<p>Finals week</p> <ul style="list-style-type: none"> <li>- Worked on completing the presentation</li> <li>- Worked on converting the python program to a Jupyter notebook</li> </ul>