**CS4220 Knowledge Discovery Methods in Bioinformatics**

**Project**

Please submit via email to Limsoon by 19/4/2020

This project contributes 20% to the final course grade. This project should be done in a group of no more than three. Please form your own group. Each group should submit a single report for this assignment. Each member of the group is expected to perform at least one part of the project independently.

The objective of this project is mainly to provide you an opportunity to propose and test some new knowledge discovery ideas of your own. You are however welcome to discuss project ideas with professors Wong Limsoon and Anders Skanderup. You may also want to check out e.g. <http://dreamchallenges.org> for ideas.

The grading of the project places equal emphasis on (i) the novelty of the idea, (ii) the effectiveness of the idea, (iii) the process through which the idea emerges, (iv) the process by which the idea is tested, and (v) the clarity of your analysis.

0/ [3 marks] Propose a problem in computational biology that you want to solve. Please articulate the motivation, relevance, and technical challenge of the problem.

1/ [3 marks] Propose a method to solve the problem stated in 1/.

2/ [4 marks] Explain why the propose method is reasonable.

3/ [3 marks] Describe how you will validate the effectiveness of the method.

4/ [3 marks] Carry out the prediction in accordance to 1/ and the validation in accordance to 3/.

5/ [4 marks] Analyse and discuss the outcome in 4/.

Please prepare a detailed report on the above. A single report should be submitted for each group. The report should ideally be organized into 7 sections: one section for each of the question above and, in the last section, explain clearly the contribution of each member of the group.

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