BIM3008 2022 Term 1

Assignment #4

Deadline: 2022/12/11, 23:59
    (This is a strict deadline. Submissions are not acceptable after the deadline)
Percentage: 8%

Highly accurate protein structure prediction with AlphaFold   Nature, 596: 583–589 (2021)
AlphaFold 2: Why It Works and Its Implications for Understanding the Relationships of Protein Sequence, Structure, and Function J Chem Inf Model, 61(10): 4827–4831 (2021)
AlphaFold 2 https://predictioncenter.org/casp14/
    "CASP14 - CASP provides an independent mechanism for the assessment of methods of protein structure modeling. From May through August 2020, CASP organizers have been posting on this website sequences of unknown protein structures for modeling. Protein models have been collected from May through mid-September, and evaluated as the experimental coordinates become available. In the summer and fall, the tens of thousands of models submitted by approximately 100 research groups worldwide are processed and evaluated. Independent assessors in each of the prediction categories bring independent insight into their assessment. Tools for viewing, comparison, and analysis of submitted models are available from this website."

Please write an essay to briefly introduce Alphafold (not less than 500 words), especially from the viewpoint of machine learning, and describe your thoughts (not less than 500 words) about the impacts delivered by AlphaFold.