

Take Home Assignment

In the genome of a newly discovered alien is a modification named “A” and “B”. This affects certain positions of the genome and where it does only modification of “A” and “B” can exist. e.g. At each position, a sample can have only A modification, only B modification or a mixture of the two. This modification seems to change depending on where in the planet the aliens lived. There are 2 distinct regions, north and south.

To investigate this an experiment was run, to analyse aliens from the north and south of the planet. Three samples (Samples 1-3) were collected from the north part and three samples (Samples 4-6) were collected from the south part. The data collected was the counts of “A” modification and “B” modifications at each position in the alien genome and is found in the “exercise_data.csv” file attached.

Question: Determine the positions in the genome which define the north vs south aliens?