

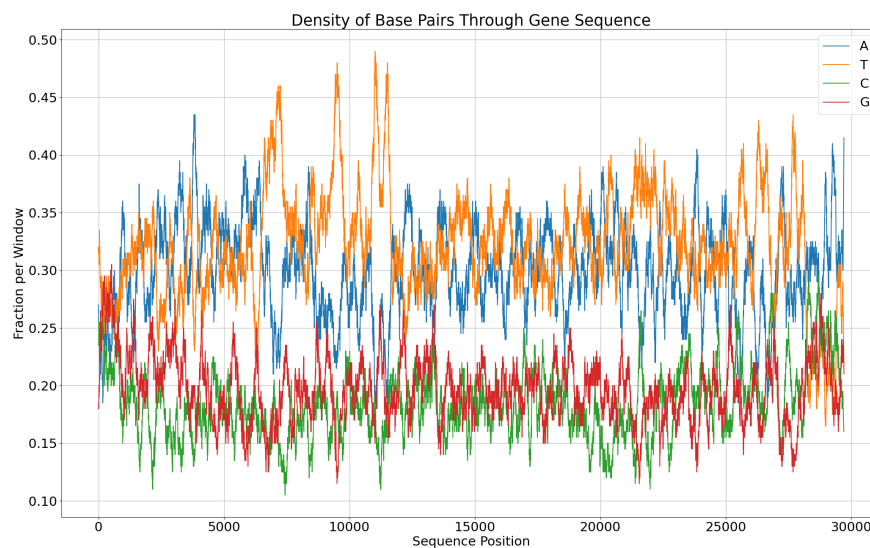
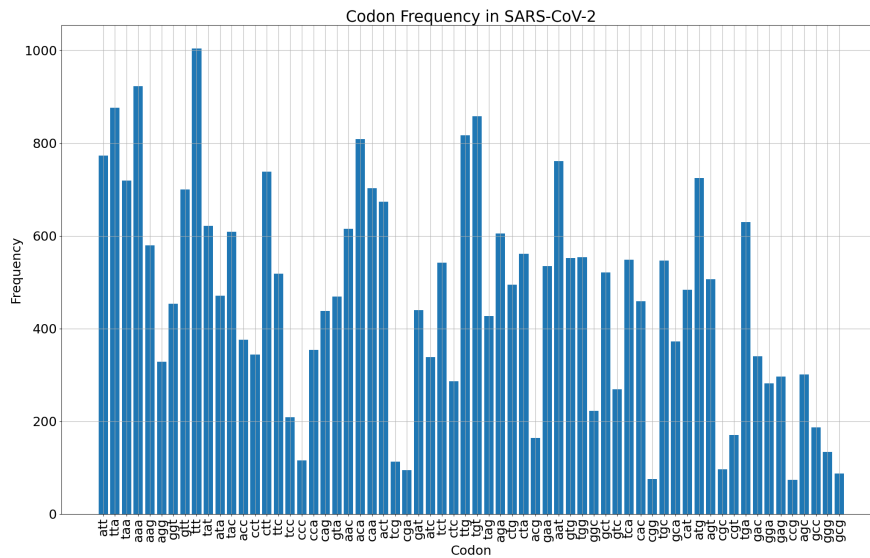
AM129 HW 4 Deliverable

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Abstract

This assignment serves as an introduction to the basics of Python; specifically, it requires a basic understanding of how to run and write .py files and also how to load in and use packages such as matplotlib and numpy. We also use basic programming objects such as for-loops, functions, and python dictionaries.

Figures Generated



Count versus Python Dictionaries

In our first function, we used the dictionary to count the frequency of each codon when looking at overlapping triplets in the gene sequence data. Our second function was similar in that we also examined overlapping windows but this time of an arbitrary size L . Recall when we use the count function, we need to explicitly state what we are counting; so if we tried to use count for our first function, we would need to create $4^3 = 64$ count commands for each possible codon. In our second function, we are only counting the occurrences of four different letters, so it is easy to use the count function. Clearly, the dictionary is beneficial because if our loop discovers a new codon, we can simply just create a new key name and adjust/define the count.