

lab01

August 22, 2024

```
[ ]: def encode(string):
    nested_list = []
    encoded_dict = {
        'A': [1,0,0,0],
        'C': [0,1,0,0],
        'G': [0,0,1,0],
        'T': [0,0,0,1]
    }
    for char in string:
        if char.upper() not in encoded_dict:
            nested_list.append([0,0,0,0])
        else:
            nested_list.append(encoded_dict[char.upper()])
    return nested_list
```

```
[ ]: print(encode('AGGTGCGX'))
print(encode('ACNCTGA'))
print(encode('TGCAAAG'))
print(encode('AASECVFF'))
```

```
[[1, 0, 0, 0], [0, 0, 1, 0], [0, 0, 1, 0], [0, 0, 0, 1], [0, 0, 1, 0], [0, 1, 0,
0], [0, 0, 1, 0], [0, 0, 0, 0]]
[[1, 0, 0, 0], [0, 1, 0, 0], [0, 0, 0, 0], [0, 1, 0, 0], [0, 0, 0, 1], [0, 0, 1,
0], [1, 0, 0, 0]]
[[0, 0, 0, 1], [0, 0, 1, 0], [0, 1, 0, 0], [1, 0, 0, 0], [1, 0, 0, 0], [1, 0, 0,
0], [0, 0, 1, 0]]
[[1, 0, 0, 0], [1, 0, 0, 0], [0, 0, 0, 0], [0, 0, 0, 0], [0, 1, 0, 0], [0, 0, 0,
0], [0, 0, 0, 0], [0, 0, 0, 0]]
```