Work efficiently, stay organized, collaborate, and achieve your dreams with GitHub and version control.

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import pickle
import matplotlib.pyplot as plt
import matplotlib.pylab as lab
import operator
from collections import Counter

with open('translate.pkl', 'rb') as f:
    translate = pickle.load(f)

with open('allele_cic_with_WT.pkl', 'rb') as f:
    bar_to_codon = pickle.load(f)

with open('aminorotnumber.pkl', 'rb') as f:
    amin_to_number = pickle.load(f)

bar_to_aa = {key: (value[0], translate[value[1]].replace('T', 'U')) for key, value in bar_to_codon.items() if value[1] != 'WT'}

with open('CTGATC.fastq', 'r') as f:
    count = 0
    all_lines = []
    for line in f:
        count += 1
        if count % 4 == 2:
            all_lines.append(line.split('
')[0])

    # add all 18-bp barcodes to a list
    N_barcode = []
    N_bardecoder = []
    N_top = []
    N_topdecoder = []
    # for line in all_lines:
    #     barcode.append(line[0:18])
    #     N_bardecoder.append(line[0:18])
    #     N_topdecoder.append(line[0:18])
    # return

    # remove all barcodes that have "N" from list; add them to a new list
    N_bardecoder = []
    for element in barcode:
        if 'N' in element:
            barcode.remove(element)
            N_bardecoder.append(element)

    # make a new list containing all of the reverse complements of the barcodes
    N_bardecoder.append(all_lines[0:18])
    N_bardecoder.append(all_lines[0:18])

    # needed for comparing to bar_to_aa dictionary
Version control 🎉

- Experiment without interfering with working code
- Find when a bug arose in your code
- Maintain multiple versions of script
- Revert back to a working version of code after ruining it
GitHub: What and why

- Git: remote Version Control System (VCS)
- The Hub: a place to store your work, network, and collaborate
- Repositories ("repos") for organization
- Command-line and GUI interfaces
Workflow

1. Create and share a repository
2. Create a branch—your personal version of the master project/branch
3. Make and commit changes to your branch
4. Submit and review a pull request
5. Merge the pull request with the master