import numpy as np

import pandas as pd

#taking 3 parameters

def group\_adjust(vals, groups, weights):

df = pd.DataFrame(groups)

df = df.transpose()

df.columns = [grps\_1, 'grps\_2', 'grps\_3']

df['vals'] = vals

#grouping on the basis of group and values and calculating mean of the intermitted dataframe

df['grps\_3\_mean'] = df.groupby('grp\_3')['vals'].transform(np.mean)

df['grps\_2\_mean'] = df.groupby('grps\_2')['vals'].transform(np.mean)

df['grps\_1\_mean'] = df.groupby('grps\_1')['vals'].transform(np.mean)

df['weighted\_mean'] = (weights[0] \* df['grps\_1\_mean']) + (weights[1] \* df['grps\_2\_mean']) + (weights[2] \* df['grps\_3\_mean'])

df['demeaned\_vals'] = (df['vals'] - df['weighted\_mean'])

deameaned\_list = df['demeaned\_vals'].to\_list()

print(deameaned\_list)