SAMPLEPERIOD = 0.000078

def fft(inp\_file, out\_file, axis):

basepath = '/Users/sahil308/Desktop'

datafile = os.path.join(basepath, inp\_file)

df = pd.read\_csv(inp\_file)

df['days'] = df['timestamp'].apply(lambda x: datetime.datetime.strptime(x.replace('.', ''), '%m/%d/%Y %H:%M:%S %p')).dt.date

all\_days = df['days'].unique()

for index, day in enumerate(all\_days):

# if index==2:

# break

# print('iteration no. 1')

# print()

day = df.loc[df['days']==day, :]

csvList = day[axis]

# print(csvList)

maxFreq = (1/SAMPLEPERIOD)/2

fftVib = abs(np.fft.fft(csvList[0:len(csvList)//2]))

fftVib\_trans = fftVib[np.newaxis]

freqSpace = list(map(lambda x: round(x,2), np.linspace(0.0, maxFreq, len(csvList)//2)))

fft\_df = pd.DataFrame(fftVib\_trans, columns= freqSpace)

if index ==0:

# print(index)

fft\_df.to\_csv(out\_file, index=False)

else:

# print(index)

fft\_df.to\_csv(out\_file, mode='a', header=False, index=False)

fft('dum.csv', 'results.csv', 'x\_axis\_value')