clc;

clc;

clear all;

close all;

% Open and read the file

data = load("C:\Users\Rutuja\OneDrive\Desktop\emg\_healthy.txt"); % assumes two columns: time and amplitude

t = data(:, 1); % time values

emg = data(:, 2); % EMG signal values

fs = 1000; % Sampling frequency (Hz)

N = length(emg); % Number of samples

f = linspace(0, fs, N); % Frequency axis

Y = fft(emg); % Apply FFT

Y(1) = 0; % Remove DC component

Y\_mag = abs(Y); % Magnitude spectrum

[~, idx] = max(Y\_mag); % Index of dominant frequency

dominant\_freq = f(idx); % Value from frequency axis

fprintf('Correct Dominant Frequency: %f Hz\n',dominant\_freq);