

Extract all the topics of interest from ROSBAG

```
clc
clear
% Specify the directory path where the files are located
directory = 'C:\Users\sansk\MATLAB\ARMLAB\rosbags';

% Get the list of file names in the directory
fileList = dir(directory);

% Initialize an empty cell array to store the file names
fileNames = cell(length(fileList), 1);

% Extract file names and store them in the cell array
for i = 1:length(fileList)
    fileNames{i} = fileList(i).name;
end
```

```
cd 'C:\Users\sansk\MATLAB\ARMLAB'
% Initialize an empty cell array to store all rosbags
bag = cell(length(fileNames),1);
% Process each file name

for i = 1:length(fileNames)
    % Get the current file name
    fileName = fileNames{i};

    % Specify the full file path
    filePath = fullfile(directory, fileName);
    if ~isfile(filePath)
        fprintf('Skipping directory: %s\n', fileName);
        continue
    % Check if the current item is a file (excluding directories)
    else
        % Add your processing code here
        fprintf('Processing file: %s\n', fileName);
        % Generate the variable name dynamically
        %bagname = sprintf('bag%d', i);
        % Generate each bag struct for the variable
        bag{i} = rosbagReader(filePath);

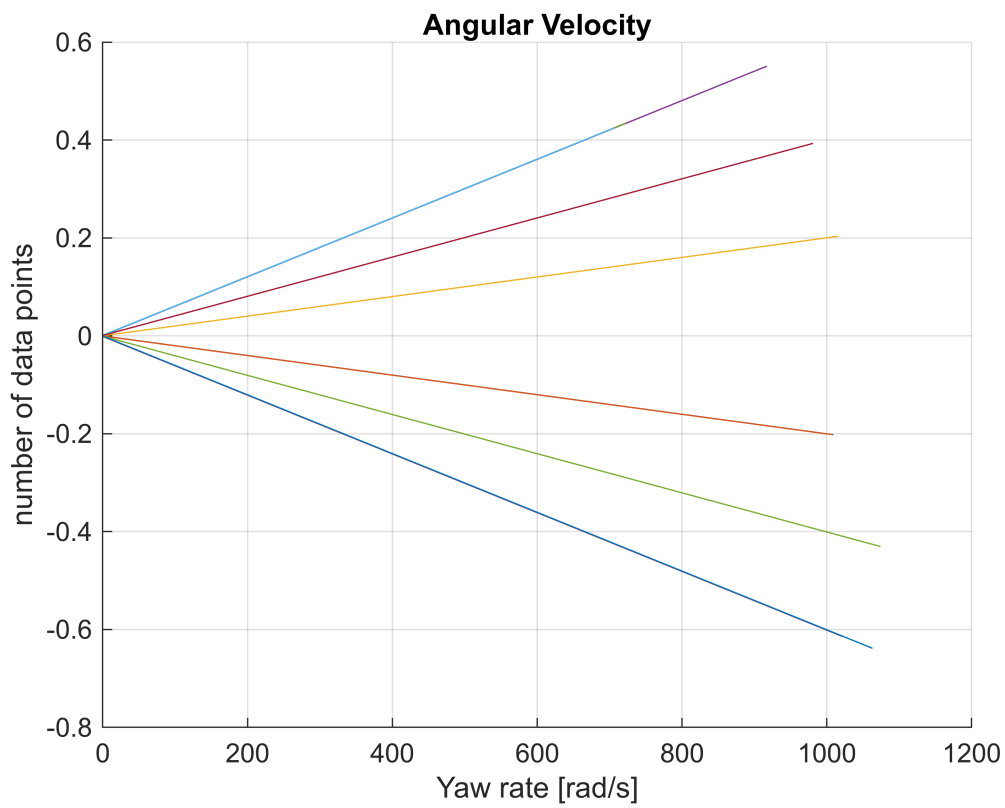
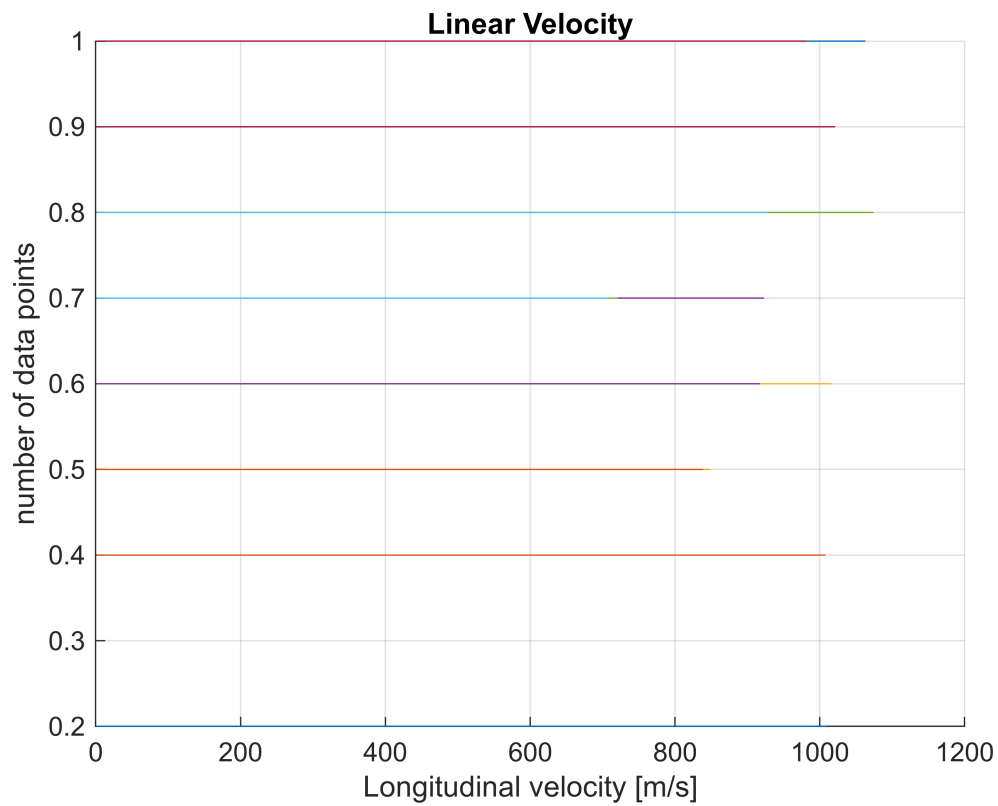
        % Assign the value to the dynamically named variable using eval
        %eval([bagname ' = bag;']);
    end
end

end
```

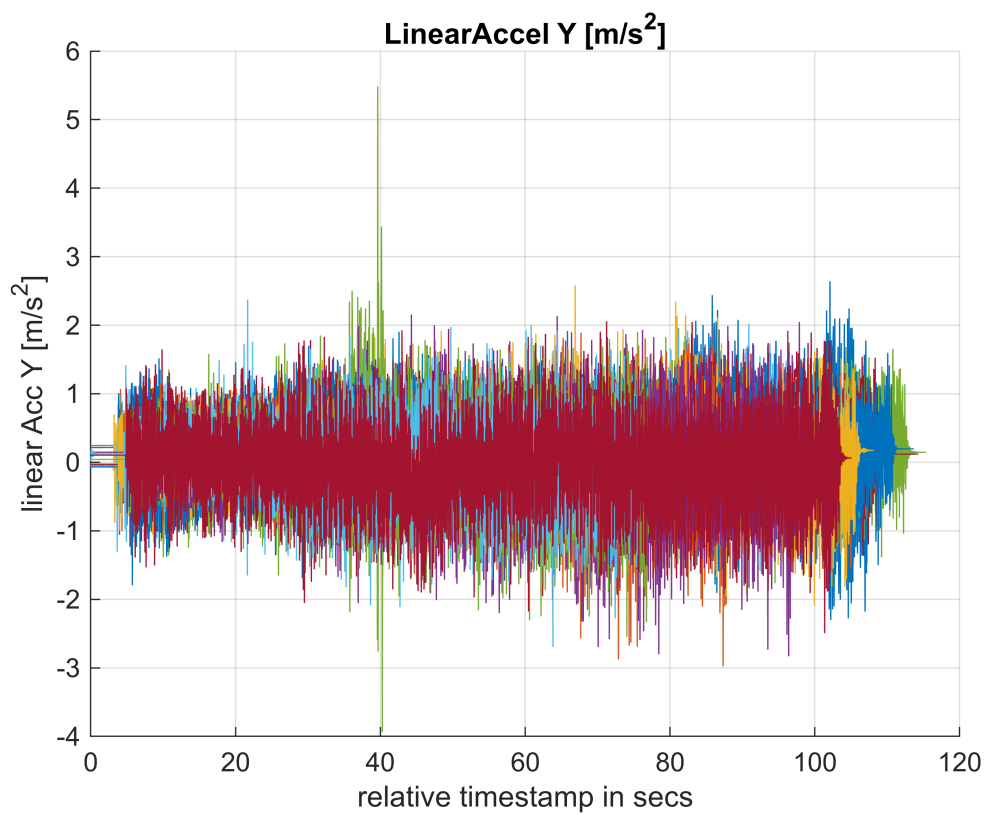
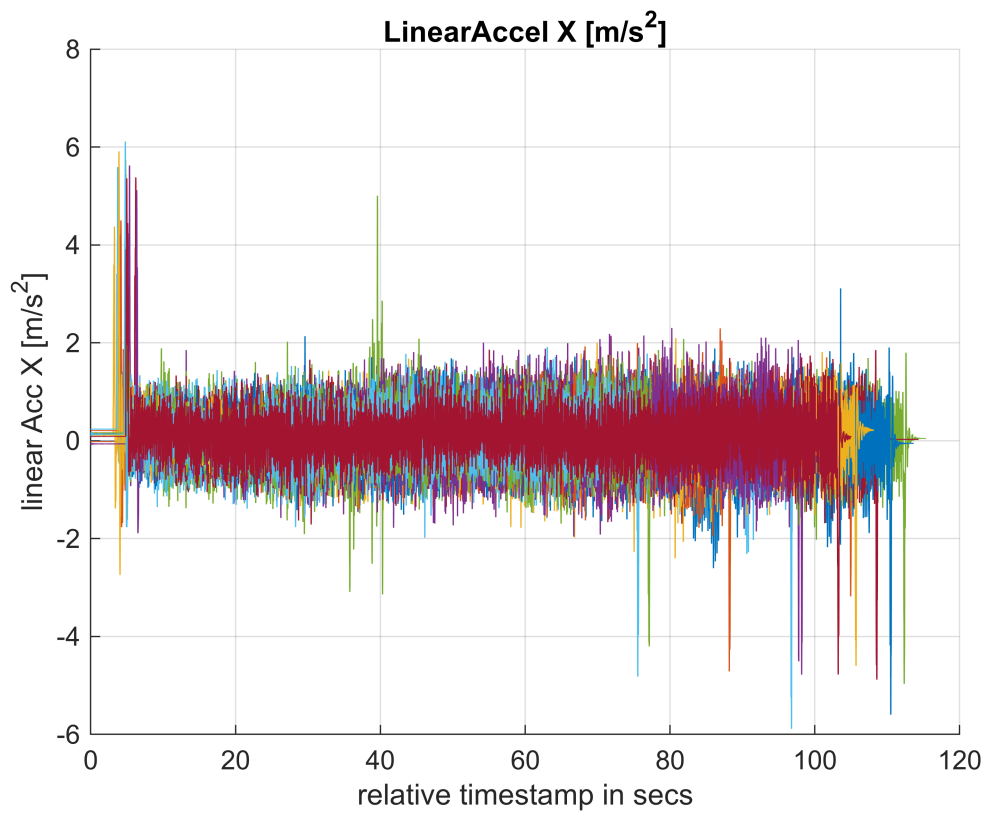
```
Skipping directory: .
Skipping directory: ..
Processing file: fsc_v_0.2_m_0002_2023-05-06-14-12-47.bag
Warning: No Header found for topic /husky_velocity_controller/cmd_vel. RelTime may be inaccurate
Processing file: fsc_v_0.4_m_0002_2023-05-06-14-15-33.bag
Warning: No Header found for topic /husky_velocity_controller/cmd_vel. RelTime may be inaccurate
Processing file: fsc_v_0.5_m_0006_2023-05-06-15-26-01.bag
Warning: No Header found for topic /husky_velocity_controller/cmd_vel. RelTime may be inaccurate
Processing file: fsc_v_0.7_m_0006_2023-05-06-15-20-49.bag
Warning: No Header found for topic /husky_velocity_controller/cmd_vel. RelTime may be inaccurate
Processing file: fsc_v_0.8_m_0004_2023-05-06-14-59-41.bag
Warning: No Header found for topic /husky_velocity_controller/cmd_vel. RelTime may be inaccurate
Processing file: fsc_v_0.8_m_0006_2023-05-06-15-18-16.bag
Warning: No Header found for topic /husky_velocity_controller/cmd_vel. RelTime may be inaccurate
Processing file: fsc_v_0.9_m_0006_2023-05-06-15-12-52.bag
Warning: No Header found for topic /husky_velocity_controller/cmd_vel. RelTime may be inaccurate
Processing file: fsc_v_1_m_0006_2023-05-06-15-09-53.bag
Warning: No Header found for topic /husky_velocity_controller/cmd_vel. RelTime may be inaccurate
Processing file: fsc_v_0.5_m_0004_2023-05-06-16-01-39.bag
Warning: No Header found for topic /husky_velocity_controller/cmd_vel. RelTime may be inaccurate
Processing file: fsc_v_0.6_m_0002_2023-05-06-16-19-49.bag
Warning: No Header found for topic /husky_velocity_controller/cmd_vel. RelTime may be inaccurate
Processing file: fsc_v_0.6_m_0006_2023-05-06-15-32-25.bag
Warning: No Header found for topic /husky_velocity_controller/cmd_vel. RelTime may be inaccurate
Processing file: fsc_v_0.7_m_0006_2023-05-06-15-35-21.bag
Warning: No Header found for topic /husky_velocity_controller/cmd_vel. RelTime may be inaccurate
Processing file: fsc_v_0.8_m_0006_2023-05-06-15-37-17.bag
Warning: No Header found for topic /husky_velocity_controller/cmd_vel. RelTime may be inaccurate
Processing file: fsc_v_1_m_0004_2023-05-06-16-12-27.bag
Warning: No Header found for topic /husky_velocity_controller/cmd_vel. RelTime may be inaccurate
```

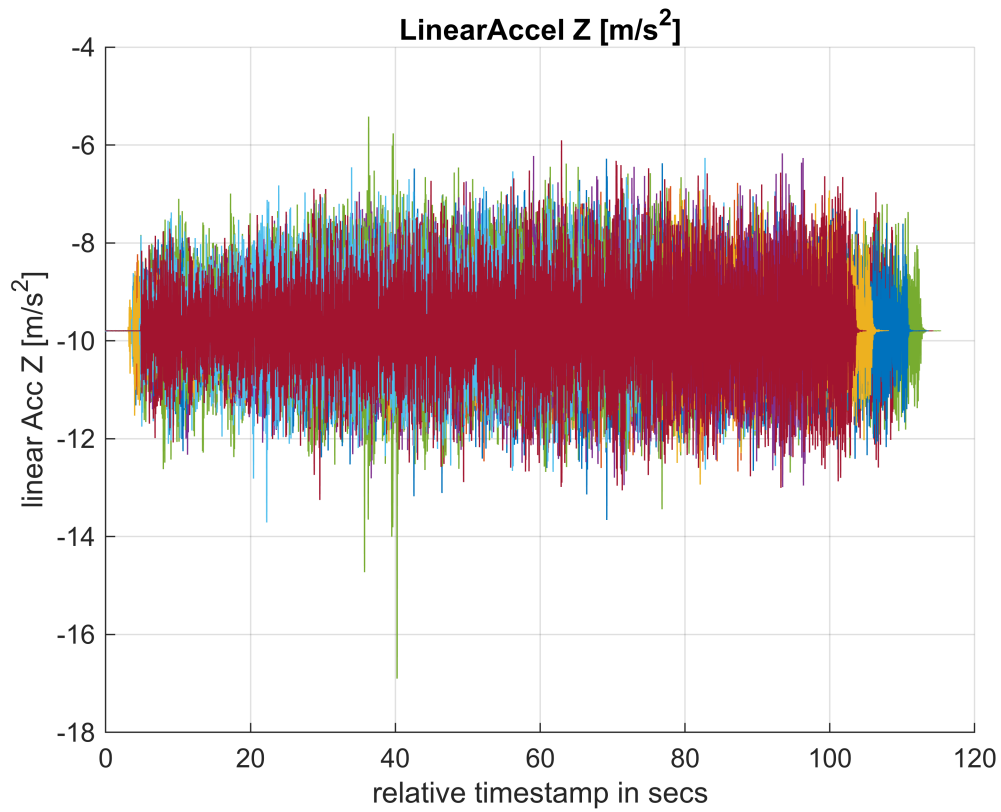
```
clf;
```

```
[figure1, figure2] = velocityPlotter(bag);
```



```
[figure3,figure4,figure5] = plotImuData(bag);
```





```
[figure6] = plotGps(bag);
```

