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#### DESCRIPTION

The folder contains the files used in the Controls Tech Talk titled "Understanding Kalman Filters, Part 7: How to use an Extended Kalman Filter in Simulink".

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This folder contains the following items:

- 1-'Extended\_Kalman\_Filter\_Simulink\_Example.slx': An extended Kalman filter is used to estimate states of a nonlinear pendulum system.
- 2-'Extended\_Kalman\_Filter\_Simulink\_Example\_params.m': Parameters of the pendulum system and extended Kalman filter.
- 3-'MeldasLibrary.slx': Custom library used in the Controls Tech Talk.
- 4-'Pendulum.jpg': Mask icon used in the pendulum block.

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#### INSTRUCTIONS TO RUN THE SIMULINK MODEL:

Download the folder titled "How to use an Extended Kalman Filter in Simulink" to your computer and set it as your MATLAB path. Run the 'Extended\_Kalman\_Filter\_Simulink\_Example\_params.m' m-file to set up the parameters for simulation. Run 'Extended\_Kalman\_Filter\_Simulink\_Example.slx' to simulate the example.