Report Generated by Test Manager

Title: AutoDRIVE RZR AEB Test Report

Author: Tanmay Samak and Chinmay Samak

Date: 08-Nov-2024 13:23:05

Test Environment

Platform: PCWIN64 MATLAB: (R2024b)

Summary

| Name | Outcome | Duration (Seconds) |
|---------------------|----------|--------------------|
| □ <u>Tests</u> | 2 🗷 2 😵 | 626.872 |
| <u>AEB</u> | 2 🗷 2 😵 | 626.872 |
| ■ AEB | 2 🗷 2 😢 | 626.871 |
| I <u>Iteration1</u> | Ø | 92.715 |
| I <u>Iteration2</u> | 8 | 114.565 |
| I <u>Iteration3</u> | 0 | 168.058 |
| I <u>Iteration4</u> | 8 | 251.337 |

Tests

Test Result Information

Result Type: Test File Result

Parent: None

Start Time: 08-Nov-2024 13:12:37 End Time: 08-Nov-2024 13:23:04

Outcome: Total: 4, Passed: 2, Failed: 2

Test Suite Information

Name: Tests

Back to Report Summary

AEB

Test Result Information

Result Type: Test Suite Result

Parent: <u>Tests</u>

Start Time: 08-Nov-2024 13:12:37 End Time: 08-Nov-2024 13:23:04

Outcome: Total: 4, Passed: 2, Failed: 2

Test Suite Information

Name: AEB

Back to Report Summary

AEB

Test Result Information

Result Type: Test Case Result

Parent: AEB

Start Time: 08-Nov-2024 13:12:37 End Time: 08-Nov-2024 13:23:04 Outcome: Failed

Cause of Failure: Test failed as iteration failed

Test Case Information

Name: AEB

Type: Baseline Test

Iteration1

Test Result Information

Result Type: Test Iteration Result

Parent: AEB

Start Time: 08-Nov-2024 13:12:37 End Time: 08-Nov-2024 13:14:10

Outcome: Passed

Test Case Information

Name: Iteration1
Type: Baseline Test

Iteration Settings

Test Overrides

| Parameter Name | Value |
|--------------------|-----------------|
| ParameterSet | Parameter Set 1 |
| VariantConfigurati | YOLO_V2_TINY |
| on | |

Logical and Temporal Assessments

| Name | Assessment |
|-----------------|---|
| | At any point of time, (collisionCount < uint16(1)) must be true |
| Collision Check | REQUIREMENTS |
| | Description: Collision |
| | Document: Requirements.slreqx |

Simulation

System Under Test Information

Model: AutoDRIVE_RZR_AEB

Release: Current Simulation Mode: normal

Override SIL or PIL Mode: 0

Configuration Set: Configuration Variant Configuration: YOLO_V2_TINY

Start Time: 0 Stop Time: 180

Checksum: 4262443901 1130679155 434270621 2409937954

Simulink Version: 24.2 Model Version: 1.38 Model Author: tsamak

Date: Fri Nov 08 13:11:49 2024

User ID: tsamak

Model Path: C:\Users\tsamak\Downloads\MathWorks RZR AEB

- System Composer\AutoDRIVE_RZR_AEB.slx

Machine Name: AUE-VKROVI-L11
Solver Name: FixedStepDiscrete

Solver Type: Fixed-Step

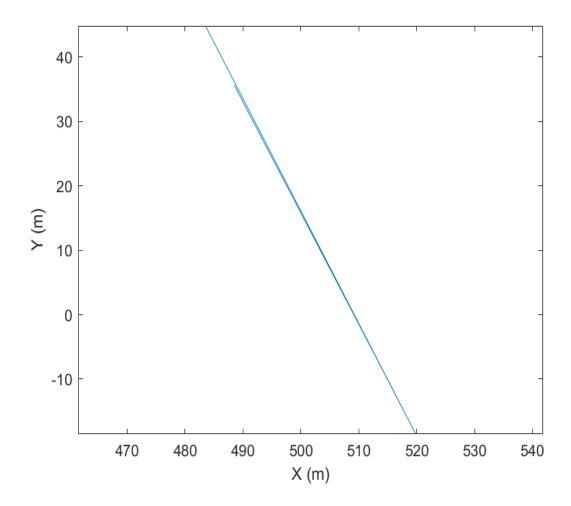
Fixed Step Size: 1

Simulation Start Time: 2024-11-08 13:12:42 Simulation Stop Time: 2024-11-08 13:14:09

Platform: PCWIN64

Parameter Overrides

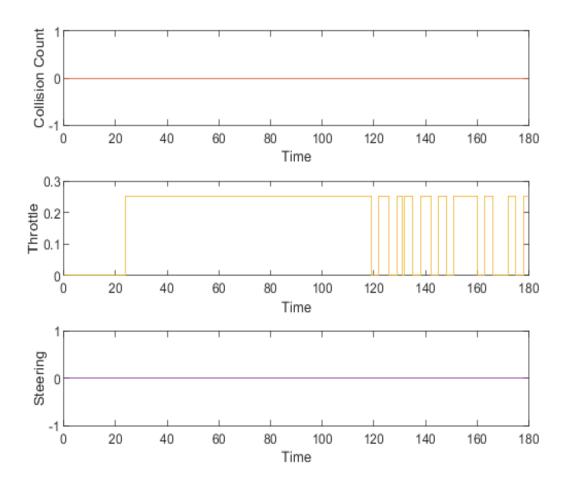
| Turumeter overrues | | | | |
|-------------------------|-------|-----------------|------------------------|--|
| Workspace Variab | Value | Source | Model Element | |
| le | | | | |
| Parameter Set 1 | | | | |
| TimeOfDay | 560 | model workspace | Simulation/Time of Day | |
| WeatherID | 6 | model workspace | Simulation/Weather ID | |



Simulation Output

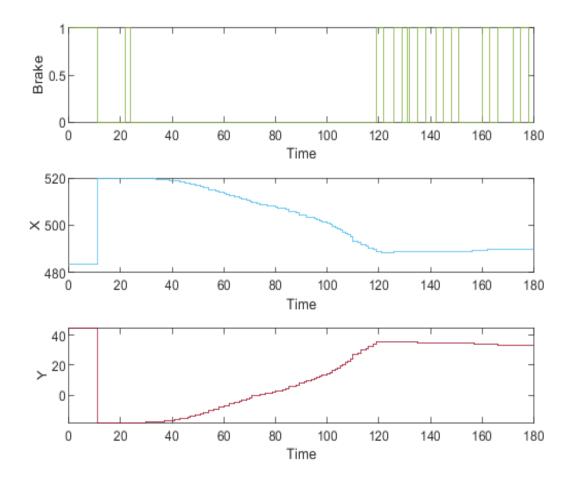
| Name | Data Type | Units | Sample Time | Interp | Sync | Link to Plo t |
|-----------------|-----------|-------|-------------|--------|-------|------------------|
| Collision Count | uint16 | | 1 | zoh | union | <u>Link</u> |
| Throttle | double | | 1 | zoh | union | <u>Link</u> |
| Steering | double | | 1 | zoh | union | <u>Link</u> |
| Brake | double | | 1 | zoh | union | <u>Link</u> |
| X | double | | 1 | zoh | union | <u>Link</u> |
| Y | double | | 1 | zoh | union | <u>Link</u> |
| Roll | double | | 1 | zoh | union | Link |
| Pitch | double | | 1 | zoh | union | Link |
| Yaw | double | | 1 | zoh | union | Link |
| Roll Rate | double | | 1 | zoh | union | Link |
| Pitch Rate | double | | 1 | zoh | union | Link |
| Yaw Rate | double | | 1 | zoh | union | <u>Link</u> |
| Acc X | double | i | 1 | zoh | union | Link |
| Acc Y | double | | 1 | zoh | union | <u>Link</u> |
| Acc Z | double | | 1 | zoh | union | <u>Link</u> |

| Name | Data Type | Units | Sample Time | Interp | Sync |
|-----------------|-----------|-------|-------------|--------|-------|
| Collision Count | uint16 | | 1 | zoh | union |
| Throttle | double | | 1 | zoh | union |
| Steering | double | | 1 | zoh | union |



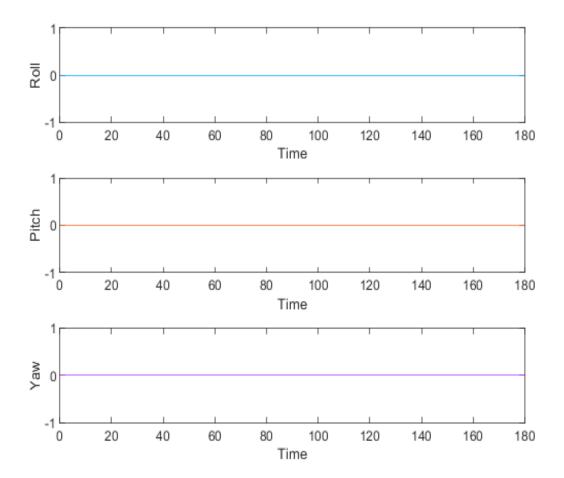
Back to Report SummaryBack to Signal Summary

| Name | Data Type | Units | Sample Time | Interp | Sync |
|-------|-----------|-------|-------------|--------|-------|
| Brake | double | i | 1 | zoh | union |
| X | double | I | 1 | zoh | union |
| Y | double | | 1 | zoh | union |



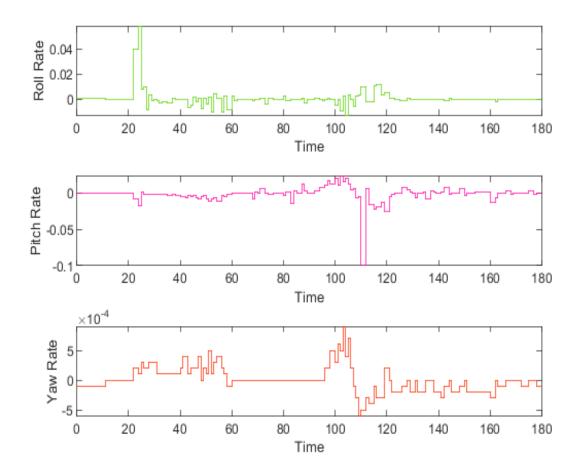
Back to Report SummaryBack to Signal Summary

| Name | Data Type | Units | Sample Time | Interp | Sync |
|-------|-----------|-------|-------------|--------|-------|
| Roll | double | i | 1 | zoh | union |
| Pitch | double | | 1 | zoh | union |
| Yaw | double | | 1 | zoh | union |



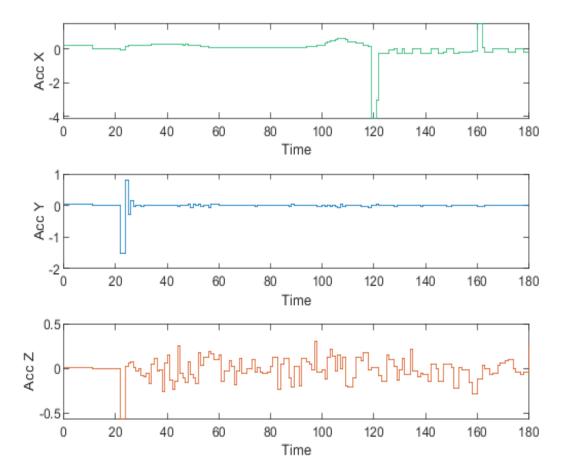
Back to Report SummaryBack to Signal Summary

| Name | Data Type | Units | Sample Time | Interp | Sync |
|------------|-----------|-------|-------------|--------|-------|
| Roll Rate | double | i | 1 | zoh | union |
| Pitch Rate | double | | 1 | zoh | union |
| Yaw Rate | double | | 1 | zoh | union |



Back to Report SummaryBack to Signal Summary

| Name | Data Type | Units | Sample Time | Interp | Sync |
|-------|-----------|-------|-------------|--------|-------|
| Acc X | double | i | 1 | zoh | union |
| Acc Y | double | | 1 | zoh | union |
| Acc Z | double | | 1 | zoh | union |



Back to Report SummaryBack to Signal Summary

No baseline criteria evaluation performed as no baseline data is available for this test.

Iteration2

Test Result Information

Result Type: Test Iteration Result

Parent: <u>AEB</u>

Start Time: 08-Nov-2024 13:14:10 End Time: 08-Nov-2024 13:16:05

Outcome: Failed

Cause of Failure: Failed criteria: Assessments

Test Case Information

Name: Iteration2 Type: Baseline Test

Iteration Settings

Test Overrides

| Parameter Name | Value |
|--------------------|-----------------|
| ParameterSet | Parameter Set 2 |
| VariantConfigurati | YOLO_V2_TINY |
| on | |

Logical and Temporal Assessments

| Name | Assessment |
|-------------------|---|
| | At any point of time, (collisionCount < uint16(1)) must be true |
| S Collision Check | REQUIREMENTS |
| | Description: Collision |
| | Document: Requirements.slreqx |

Simulation

System Under Test Information

Model: AutoDRIVE_RZR_AEB

Release: Current

Simulation Mode: normal

Override SIL or PIL Mode: 0

Configuration Set: Configuration Variant Configuration: YOLO_V2_TINY

Start Time: 0 Stop Time: 180

Checksum: 4262443901 1130679155 434270621 2409937954

Simulink Version: 24.2 Model Version: 1.38 Model Author: tsamak

Date: Fri Nov 08 13:11:49 2024

User ID: tsamak

Model Path: C:\Users\tsamak\Downloads\MathWorks RZR AEB

- System Composer\AutoDRIVE_RZR_AEB.slx

Machine Name: AUE-VKROVI-L11 Solver Name: FixedStepDiscrete

Solver Type: Fixed-Step

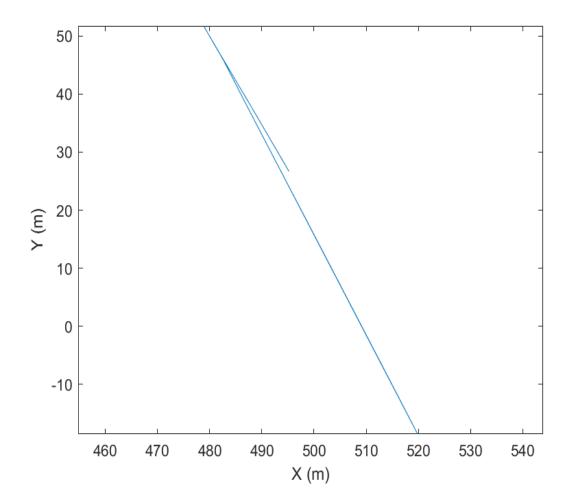
Fixed Step Size: 1

Simulation Start Time: 2024-11-08 13:14:10 Simulation Stop Time: 2024-11-08 13:16:04

Platform: PCWIN64

Parameter Overrides

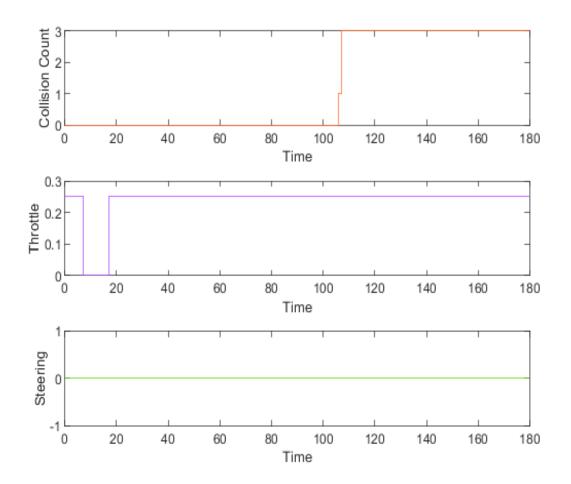
| Tarameter Overrides | | | | | | |
|-------------------------|-------|-----------------|------------------------|--|--|--|
| Workspace Variab | Value | Source | Model Element | | | |
| le | | | | | | |
| Parameter Set 2 | | | | | | |
| TimeOfDay | 0 | model workspace | Simulation/Time of Day | | | |
| WeatherID | 3 | model workspace | Simulation/Weather ID | | | |



Simulation Output

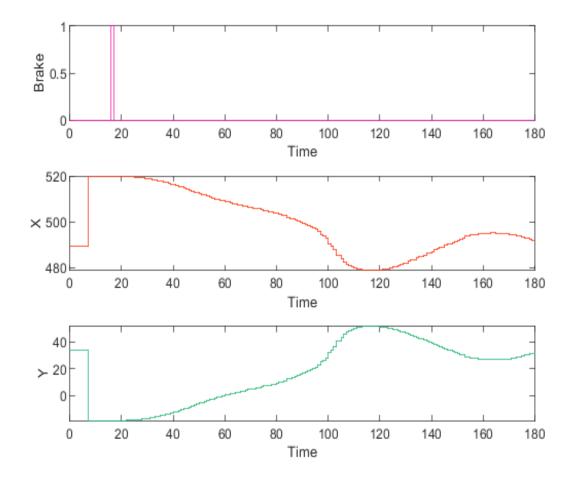
| Name | Data Type | Units | Sample Time | Interp | Sync | Link to Plo t |
|-----------------|-----------|-------|-------------|--------|-------|------------------|
| Collision Count | uint16 | | 1 | zoh | union | <u>Link</u> |
| Throttle | double | | 1 | zoh | union | <u>Link</u> |
| Steering | double | | 1 | zoh | union | <u>Link</u> |
| Brake | double | | 1 | zoh | union | <u>Link</u> |
| X | double | | 1 | zoh | union | <u>Link</u> |
| Y | double | | 1 | zoh | union | <u>Link</u> |
| Roll | double | | 1 | zoh | union | Link |
| Pitch | double | | 1 | zoh | union | Link |
| Yaw | double | | 1 | zoh | union | Link |
| Roll Rate | double | | 1 | zoh | union | Link |
| Pitch Rate | double | | 1 | zoh | union | Link |
| Yaw Rate | double | | 1 | zoh | union | Link |
| Acc X | double | i | 1 | zoh | union | Link |
| Acc Y | double | | 1 | zoh | union | <u>Link</u> |
| Acc Z | double | | 1 | zoh | union | <u>Link</u> |

| Name | Data Type | Units | Sample Time | Interp | Sync |
|-----------------|-----------|-------|-------------|--------|-------|
| Collision Count | uint16 | | 1 | zoh | union |
| Throttle | double | | 1 | zoh | union |
| Steering | double | | 1 | zoh | union |



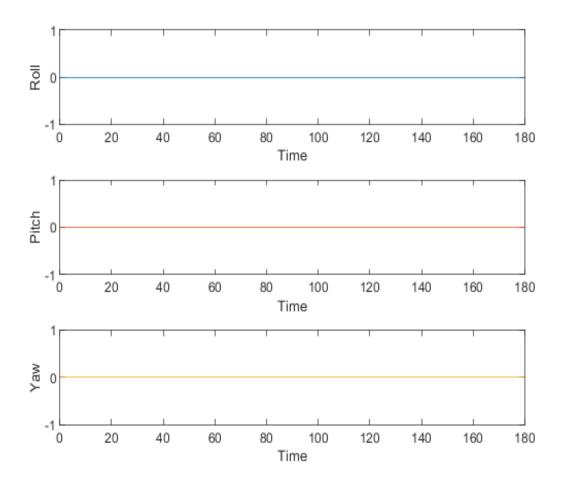
Back to Report SummaryBack to Signal Summary

| Name | Data Type | Units | Sample Time | Interp | Sync |
|--------|-----------|-------|-------------|--------|-------|
| _Brake | double | i | 1 | zoh | union |
| X | double | | 1 | zoh | union |
| Y | double | İ | 1 | zoh | union |



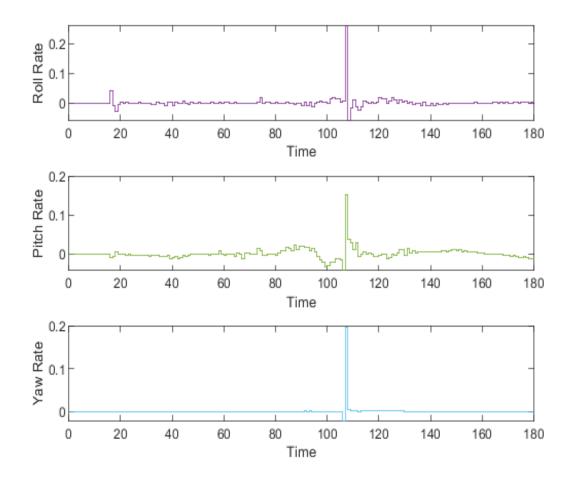
Back to Report SummaryBack to Signal Summary

| Name | Data Type | Units | Sample Time | Interp | Sync |
|-------|-----------|-------|-------------|--------|-------|
| Roll | double | i | 1 | zoh | union |
| Pitch | double | | 1 | zoh | union |
| Yaw | double | | 1 | zoh | union |



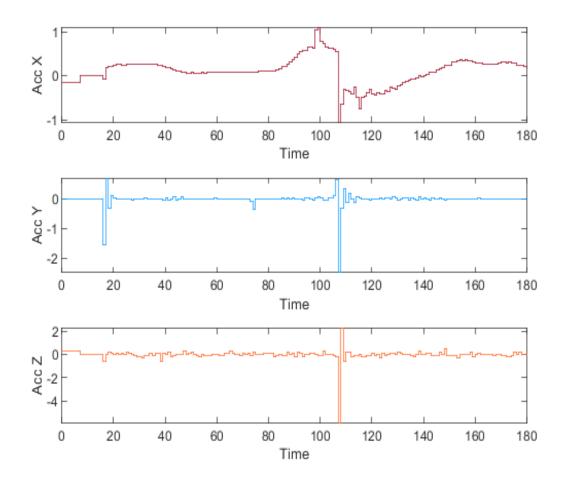
Back to Report SummaryBack to Signal Summary

| Name | Data Type | Units | Sample Time | Interp | Sync |
|------------|-----------|-------|-------------|--------|-------|
| Roll Rate | double | i | 1 | zoh | union |
| Pitch Rate | double | | 1 | zoh | union |
| Yaw Rate | double | | 1 | zoh | union |



Back to Report SummaryBack to Signal Summary

| Name | Data Type | Units | Sample Time | Interp | Sync |
|-------|-----------|-------|-------------|--------|-------|
| Acc X | double | | 1 | zoh | union |
| Acc Y | double | | 1 | zoh | union |
| Acc Z | double | | 1 | zoh | union |



Back to Report SummaryBack to Signal Summary

No baseline criteria evaluation performed as no baseline data is available for this test.

Iteration3

Test Result Information

Result Type: Test Iteration Result

Parent: <u>AEB</u>

Start Time: 08-Nov-2024 13:16:05 End Time: 08-Nov-2024 13:18:53

Outcome: Passed

Test Case Information

Name: Iteration3 Type: Baseline Test

Iteration Settings

Test Overrides

| Parameter Name | Value |
|--------------------|-----------------|
| ParameterSet | Parameter Set 1 |
| VariantConfigurati | YOLO_V4 |
| on | |

Logical and Temporal Assessments

| Name | Assessment |
|-----------------|---|
| | At any point of time, (collisionCount < uint16(1)) must be true |
| Collision Check | REQUIREMENTS |
| Comston check | Description: Collision |
| | Document: Requirements.slreqx |

Simulation

System Under Test Information

Model: AutoDRIVE_RZR_AEB

Release: Current Simulation Mode: normal

Override SIL or PIL Mode: 0

Configuration Set: Configuration Variant Configuration: YOLO_V4

Start Time: 0 Stop Time: 180

Checksum: 4262443901 1130679155 434270621 2409937954

Simulink Version: 24.2 Model Version: 1.38 Model Author: tsamak

Date: Fri Nov 08 13:11:49 2024

User ID: tsamak

Model Path: C:\Users\tsamak\Downloads\MathWorks RZR AEB

- System Composer\AutoDRIVE_RZR_AEB.slx

Machine Name: AUE-VKROVI-L11
Solver Name: FixedStepDiscrete

Solver Type: Fixed-Step

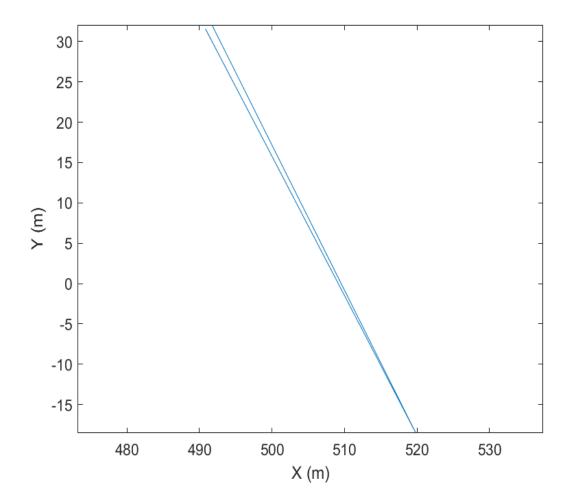
Fixed Step Size: 1

Simulation Start Time: 2024-11-08 13:16:05 Simulation Stop Time: 2024-11-08 13:18:52

Platform: PCWIN64

Parameter Overrides

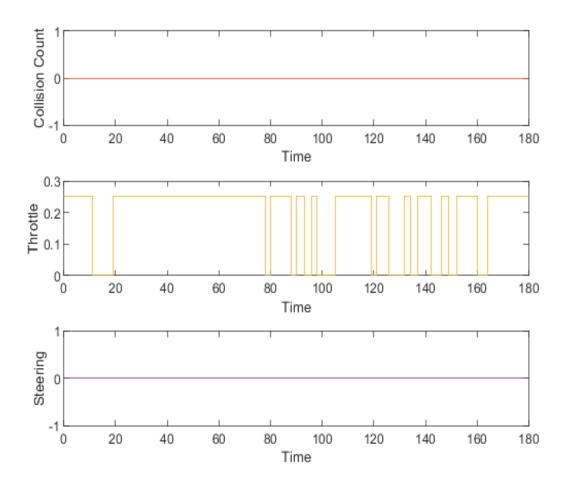
| Workspace Variab | Value | Source | Model Element | |
|-------------------------|-------|-----------------|------------------------|--|
| le | | | | |
| Parameter Set 1 | | | | |
| TimeOfDay | 560 | model workspace | Simulation/Time of Day | |
| WeatherID | 6 | model workspace | Simulation/Weather ID | |



Simulation Output

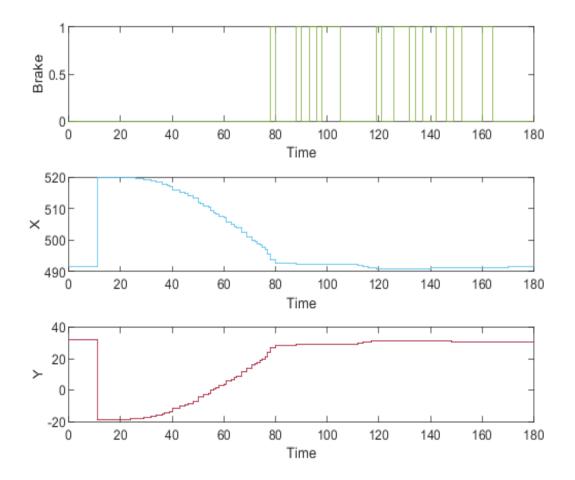
| Name | Data Type | Units | Sample Time | Interp | Sync | Link to Plo t |
|-----------------|-----------|-------|-------------|--------|-------|------------------|
| Collision Count | uint16 | | 1 | zoh | union | <u>Link</u> |
| Throttle | double | | 1 | zoh | union | <u>Link</u> |
| Steering | double | | 1 | zoh | union | <u>Link</u> |
| Brake | double | | 1 | zoh | union | <u>Link</u> |
| X | double | | 1 | zoh | union | <u>Link</u> |
| Y | double | | 1 | zoh | union | <u>Link</u> |
| Roll | double | | 1 | zoh | union | Link |
| Pitch | double | | 1 | zoh | union | Link |
| Yaw | double | | 1 | zoh | union | Link |
| Roll Rate | double | | 1 | zoh | union | Link |
| Pitch Rate | double | | 1 | zoh | union | Link |
| Yaw Rate | double | | 1 | zoh | union | <u>Link</u> |
| Acc X | double | i | 1 | zoh | union | Link |
| Acc Y | double | | 1 | zoh | union | <u>Link</u> |
| Acc Z | double | | 1 | zoh | union | <u>Link</u> |

| Name | Data Type | Units | Sample Time | Interp | Sync |
|-----------------|-----------|-------|-------------|--------|-------|
| Collision Count | uint16 | | 1 | zoh | union |
| Throttle | double | | 1 | zoh | union |
| Steering | double | | 1 | zoh | union |



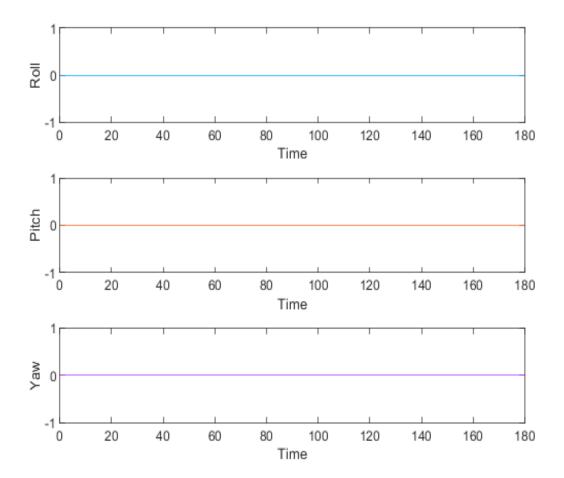
Back to Report SummaryBack to Signal Summary

| Name | Data Type | Units | Sample Time | Interp | Sync |
|-------|-----------|-------|-------------|--------|-------|
| Brake | double | | 1 | zoh | union |
| X | double | | 1 | zoh | union |
| Y | double | | 1 | zoh | union |



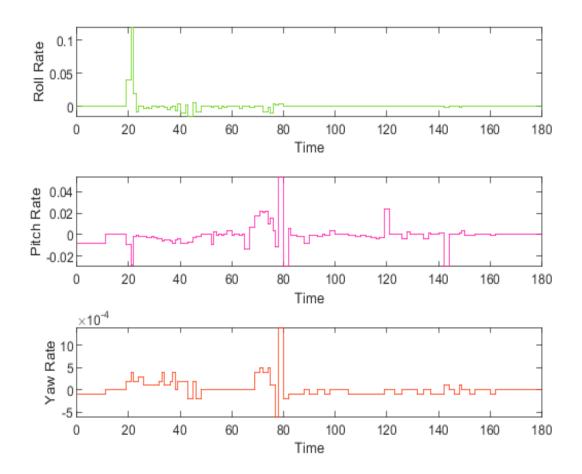
Back to Report SummaryBack to Signal Summary

| Name | Data Type | Units | Sample Time | Interp | Sync |
|-------|-----------|-------|-------------|--------|-------|
| Roll | double | i | 1 | zoh | union |
| Pitch | double | | 1 | zoh | union |
| Yaw | double | | 1 | zoh | union |



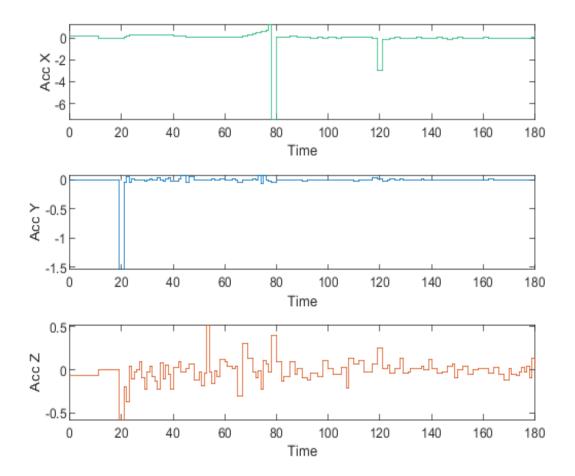
Back to Report SummaryBack to Signal Summary

| Name | Data Type | Units | Sample Time | Interp | Sync |
|------------|-----------|-------|-------------|--------|-------|
| Roll Rate | double | i | 1 | zoh | union |
| Pitch Rate | double | | 1 | zoh | union |
| Yaw Rate | double | | 1 | zoh | union |



Back to Report SummaryBack to Signal Summary

| Name | Data Type | Units | Sample Time | Interp | Sync |
|-------|-----------|-------|-------------|--------|-------|
| Acc X | double | i | 1 | zoh | union |
| Acc Y | double | | 1 | zoh | union |
| Acc Z | double | | 1 | zoh | union |



Back to Report SummaryBack to Signal Summary

No baseline criteria evaluation performed as no baseline data is available for this test.

Iteration4

Test Result Information

Result Type: Test Iteration Result

Parent: <u>AEB</u>

Start Time: 08-Nov-2024 13:18:53 End Time: 08-Nov-2024 13:23:04

Outcome: Failed

Cause of Failure: Failed criteria: Assessments

Test Case Information

Name: Iteration4
Type: Baseline Test

Iteration Settings

Test Overrides

| Parameter Name | Value |
|--------------------|-----------------|
| ParameterSet | Parameter Set 2 |
| VariantConfigurati | YOLO_V4 |
| on | |

Logical and Temporal Assessments

| Name | Assessment |
|-------------------|---|
| | At any point of time, (collisionCount < uint16(1)) must be true |
| S Collision Check | REQUIREMENTS |
| | Description: Collision |
| | Document: Requirements.slreqx |

Simulation

System Under Test Information

Model: AutoDRIVE_RZR_AEB

Release: Current

Simulation Mode: normal

Override SIL or PIL Mode: 0

Configuration Set: Configuration Variant Configuration: YOLO_V4

Start Time: 0 Stop Time: 180

Checksum: 4262443901 1130679155 434270621 2409937954

Simulink Version: 24.2 Model Version: 1.38 Model Author: tsamak

Date: Fri Nov 08 13:11:49 2024

User ID: tsamak

Model Path: C:\Users\tsamak\Downloads\MathWorks RZR AEB

- System Composer\AutoDRIVE_RZR_AEB.slx

Machine Name: AUE-VKROVI-L11 Solver Name: FixedStepDiscrete

Solver Type: Fixed-Step

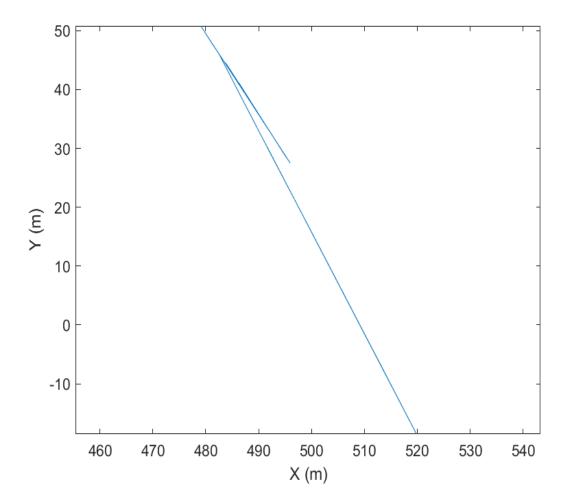
Fixed Step Size: 1

Simulation Start Time: 2024-11-08 13:18:53 Simulation Stop Time: 2024-11-08 13:23:03

Platform: PCWIN64

Parameter Overrides

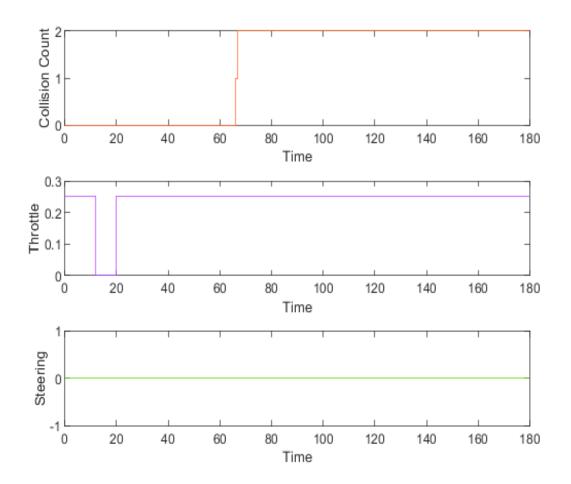
| Turumeter overrues | | | | | | | |
|-------------------------|-------|-----------------|------------------------|--|--|--|--|
| Workspace Variab | Value | Source | Model Element | | | | |
| le | | | | | | | |
| Parameter Set 2 | | | | | | | |
| TimeOfDay | 0 | model workspace | Simulation/Time of Day | | | | |
| WeatherID | 3 | model workspace | Simulation/Weather ID | | | | |



Simulation Output

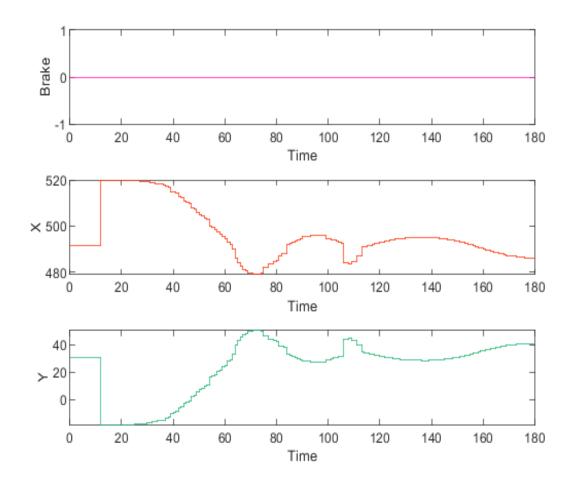
| Name | Data Type | Units | Sample Time | Interp | Sync | Link to Plo t |
|-----------------|-----------|-------|-------------|--------|-------|------------------|
| Collision Count | uint16 | | 1 | zoh | union | <u>Link</u> |
| Throttle | double | | 1 | zoh | union | <u>Link</u> |
| Steering | double | | 1 | zoh | union | <u>Link</u> |
| Brake | double | | 1 | zoh | union | <u>Link</u> |
| X | double | | 1 | zoh | union | <u>Link</u> |
| Y | double | | 1 | zoh | union | <u>Link</u> |
| Roll | double | | 1 | zoh | union | Link |
| Pitch | double | | 1 | zoh | union | Link |
| Yaw | double | | 1 | zoh | union | Link |
| Roll Rate | double | | 1 | zoh | union | Link |
| Pitch Rate | double | | 1 | zoh | union | Link |
| Yaw Rate | double | | 1 | zoh | union | <u>Link</u> |
| Acc X | double | i | 1 | zoh | union | Link |
| Acc Y | double | | 1 | zoh | union | <u>Link</u> |
| Acc Z | double | | 1 | zoh | union | <u>Link</u> |

| Name | Data Type | Units | Sample Time | Interp | Sync |
|-----------------|-----------|-------|-------------|--------|-------|
| Collision Count | uint16 | | 1 | zoh | union |
| Throttle | double | | 1 | zoh | union |
| Steering | double | | 1 | zoh | union |



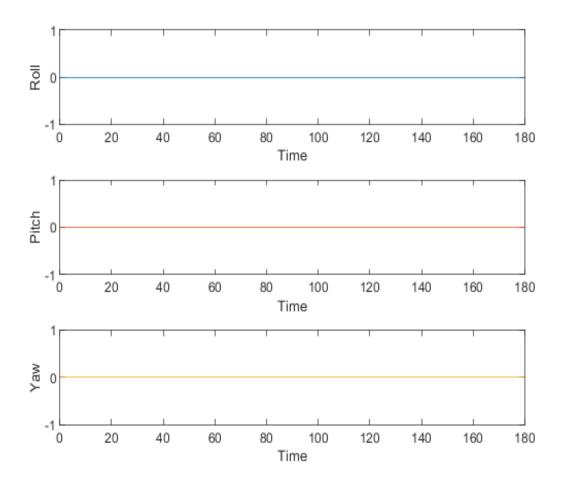
Back to Report SummaryBack to Signal Summary

| Name | Data Type | Units | Sample Time | Interp | Sync |
|-------|-----------|-------|-------------|--------|-------|
| Brake | double | | 1 | zoh | union |
| X | double | | 1 | zoh | union |
| Y | double | | 1 | zoh | union |



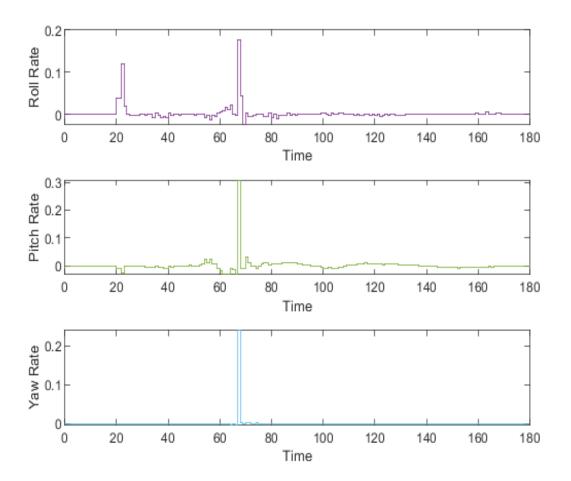
Back to Report SummaryBack to Signal Summary

| Name | Data Type | Units | Sample Time | Interp | Sync |
|-------|-----------|-------|-------------|--------|-------|
| Roll | double | | 1 | zoh | union |
| Pitch | double | | 1 | zoh | union |
| Yaw | double | | 1 | zoh | union |



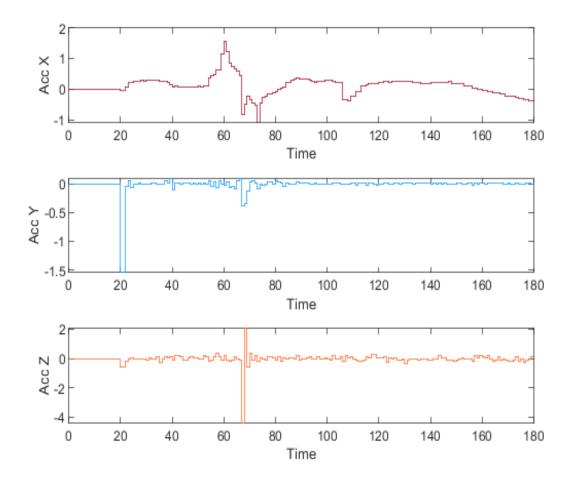
Back to Report SummaryBack to Signal Summary

| Name | Data Type | Units | Sample Time | Interp | Sync |
|------------|-----------|-------|-------------|--------|-------|
| Roll Rate | double | i | 1 | zoh | union |
| Pitch Rate | double | | 1 | zoh | union |
| Yaw Rate | double | | 1 | zoh | union |



Back to Report SummaryBack to Signal Summary

| Name | Data Type | Units | Sample Time | Interp | Sync |
|-------|-----------|-------|-------------|--------|-------|
| Acc X | double | i | 1 | zoh | union |
| Acc Y | double | ii | 1 | zoh | union |
| Acc Z | double | | 1 | zoh | union |



Back to Report SummaryBack to Signal Summary

No baseline criteria evaluation performed as no baseline data is available for this test.