































Report Generated by Test Manager

Title: Avoidance in Real Scenarios - Test Report
Author: Gianvincenzo Daddabbo, Gaetano Gallo, Alberto Ruggeri, Martina Tedesco, Alessandro Toschi
Date: 10-Jun-2021 18:44:19

Test Environment

Platform: PCWIN64
MATLAB: (R2021a)

Summary

Name	Outcome	Duration (Seconds)
 Avoidance real scenario	15 	2010.532
 Avoidance in real scenario (Hyundai Azera)	3 	510.632
 A14 Highway		92.222
 Puglia		360.53
 Indianapolis Motor Speedway		57.27
 Avoidance in real scenario (BMW 325i)	3 	719.645
 A14 Highway		125.879
 Puglia		523.839
 Indianapolis Motor Speedway		69.289
 Avoidance in real scenario (Ford E150)	3 	285.694
 A14 Highway		81.346
 Puglia		176.446
 Indianapolis Motor Speedway		27.556
 Avoidance in real scenario (Suzuki Samurai)	3 	233.484
 A14 Highway		52.499
 Puglia		156.984
 Indianapolis Motor Speedway		23.732
 Avoidance in real scenario (Volkswagen Beetle)	3 	259.589
 A14 Highway		54.725
 Puglia		155.952
 Indianapolis Motor Speedway		48.583

Avoidance_real_scenario

Test Result Information

Result Type:	Test File Result
Parent:	None
Start Time:	10-Jun-2021 18:08:11
End Time:	10-Jun-2021 18:41:42
Outcome:	Total: 15, Passed: 15
Description:	

This report describes the tests performed for the Obstacle Avoidance regarding two dynamic obstacles moving at a lower speed respect to the ego-vehicle and a set of static obstacles considering three real scenarios.

Test Suite Information

Name: Avoidance_real_scenario

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Avoidance in real scenario (Hyundai Azera)

Test Result Information

Result Type:	Test Suite Result
Parent:	Avoidance real scenario
Start Time:	10-Jun-2021 18:08:11
End Time:	10-Jun-2021 18:16:42
Outcome:	Total: 3, Passed: 3

Test Suite Information

Name: Avoidance in real scenario (Hyundai Azera)

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A14 Highway

Test Result Information

Result Type: Test Case Result
Parent: [Avoidance in real scenario \(Hyundai Azera\)](#)
Start Time: 10-Jun-2021 18:08:11
End Time: 10-Jun-2021 18:09:43
Outcome: **Passed**

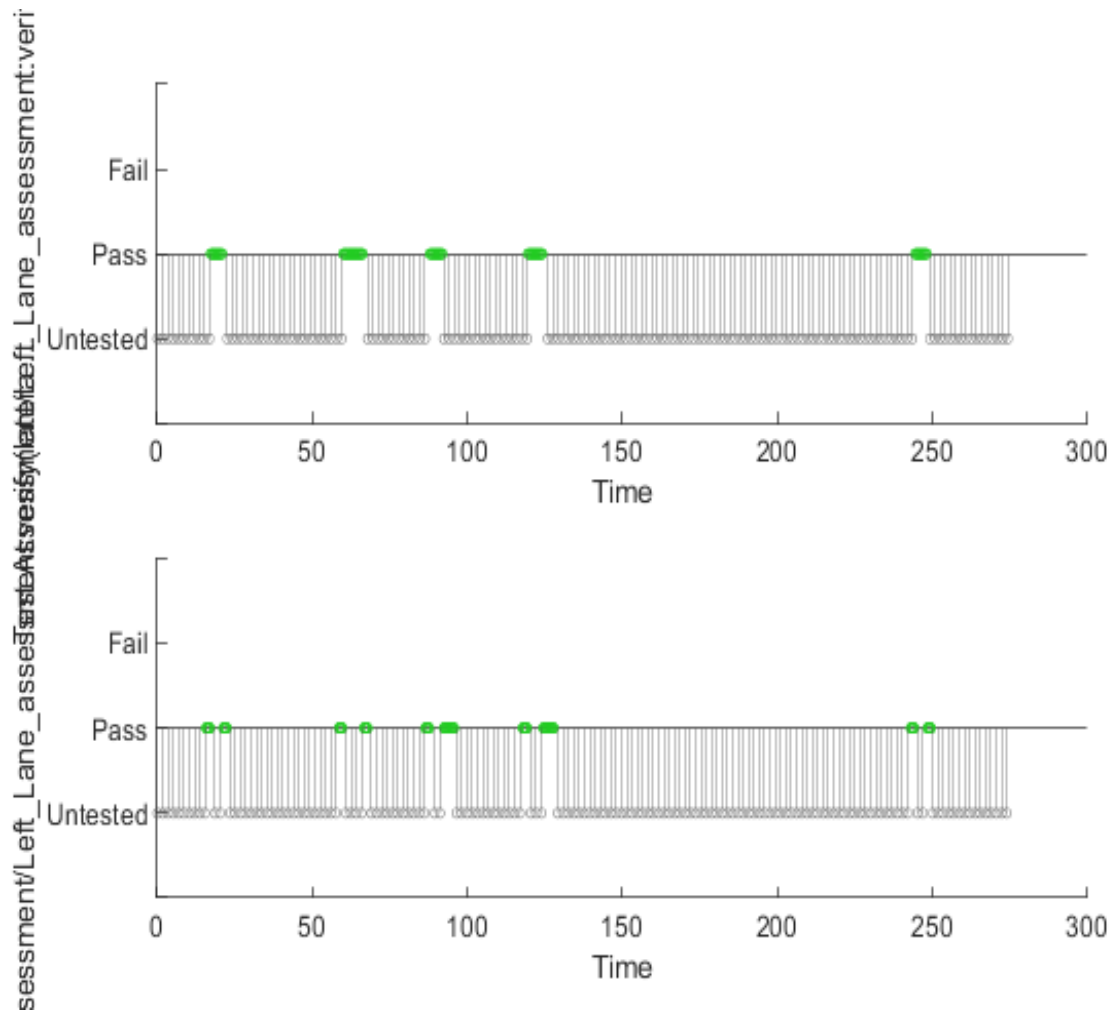
Test Case Information

Name: A14 Highway
Type: Simulation Test

Verify Result

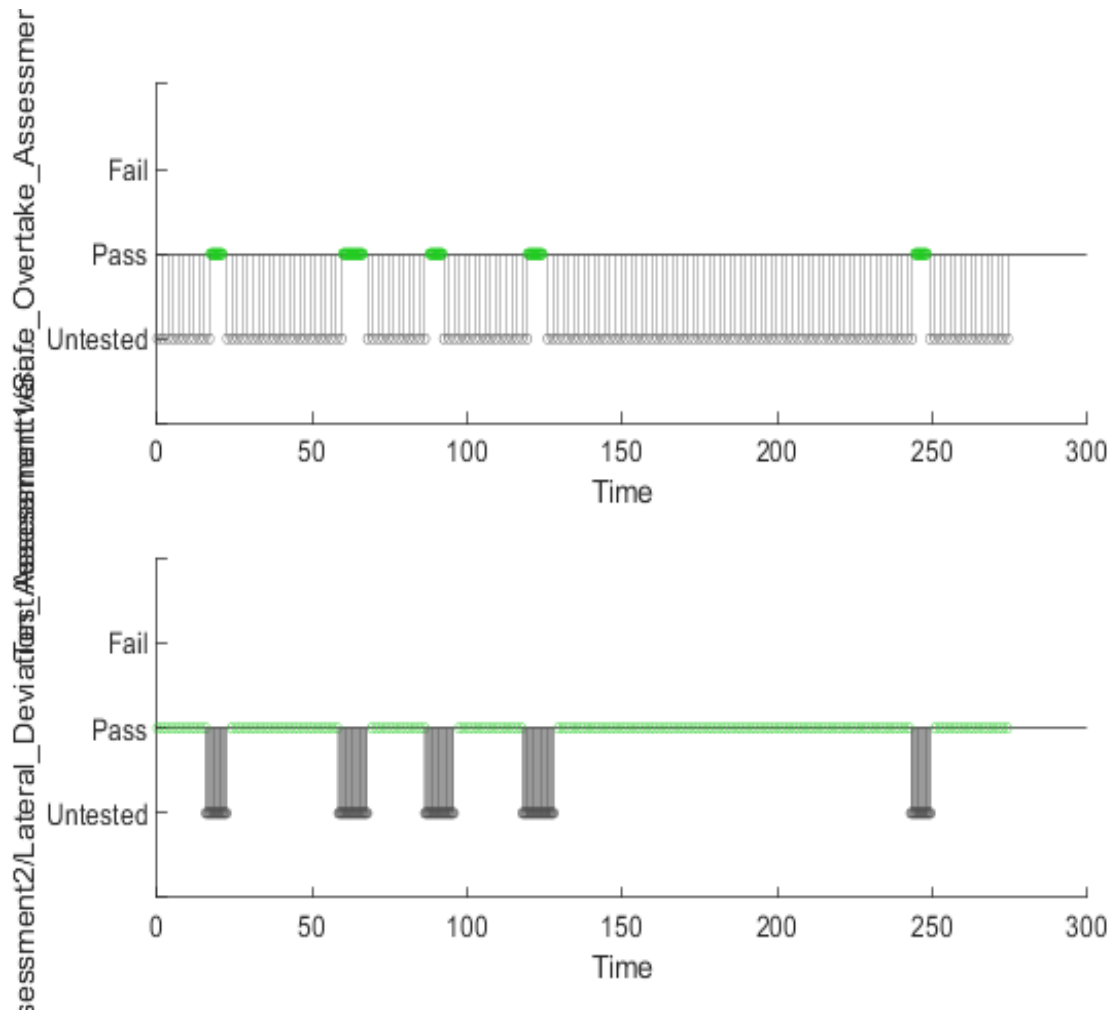
Name	Link to Plot
✔ Test Assessment/Left_Lane_assessment:verify(lateral_dev >= 2 && lateral_dev <= 6)	Link
✔ Test Assessment/Left_Lane_assessment:verify(lateral_dev < 6)	Link
✔ Test Assessment1/Safe_Overtake_Assessment:verify(duration(lateral_dev > 5 && lateral_dev < 3,sec)<1)	Link
✔ Test Assessment2/Lateral_Deviation_Assessment:verify(duration(lateral_dev > 0.75,sec)<1)	Link
✔ Test Assessment3/Maximum_Lateral_Deviation_Assessment:verify(lateral_dev < 1)	Link
✔ Lateral Acceleration Assessment/Global_Assessment:verify(duration(Lateral_acceleration>=2,sec)<=0.5)	Link

Name
✔ Test Assessment/Left_Lane_assessment:verify(lateral_dev >= 2 && lateral_dev <= 6)
✔ Test Assessment/Left_Lane_assessment:verify(lateral_dev < 6)



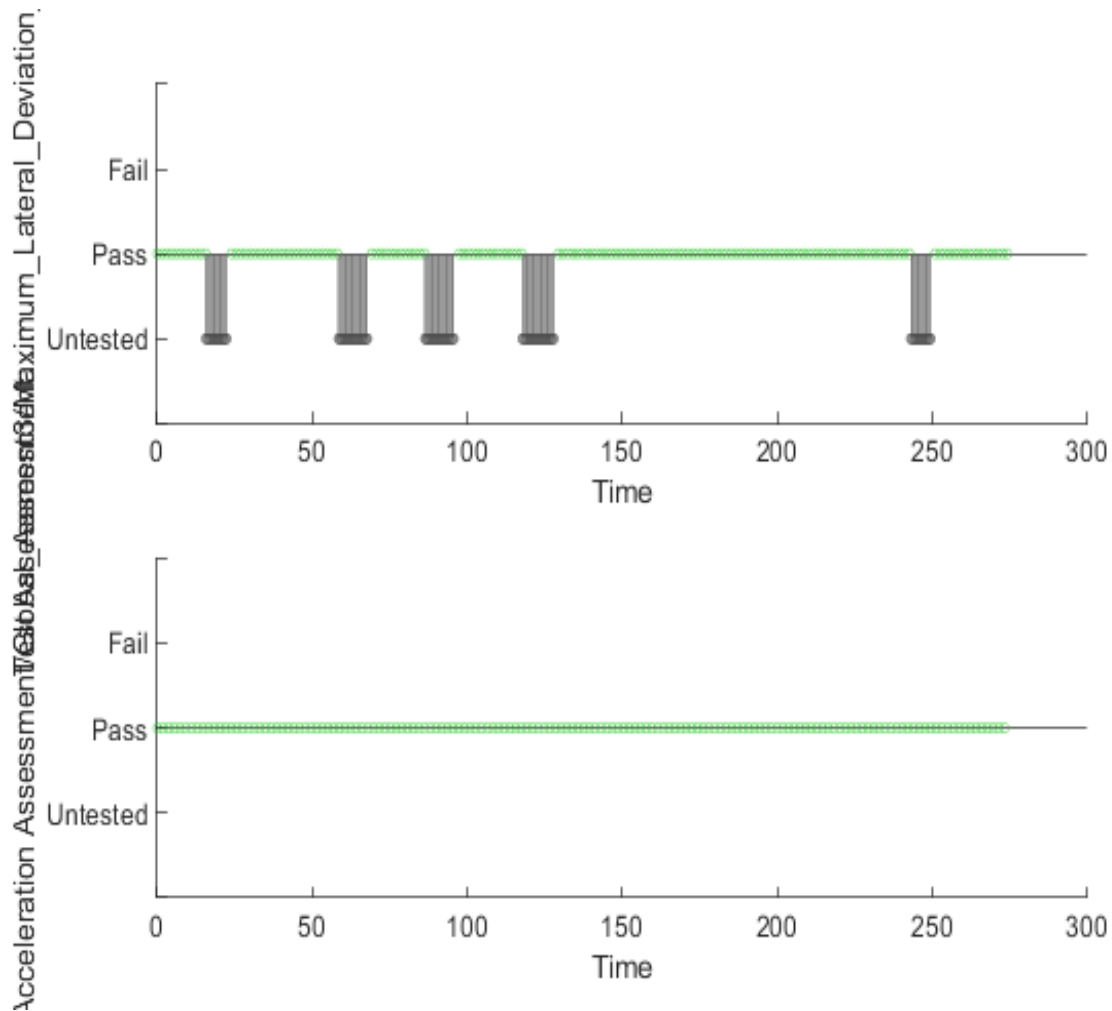
[Back to Report Summary](#)[Back to Signal Summary](#)

Name	
✓	Test Assessment1/Safe_Overtake_Assessment:verify(duration(lateral_dev > 5 && lateral_dev < 3,sec)<1)
✓	Test Assessment2/Lateral_Deviation_Assessment:verify(duration(lateral_dev > 0.75,sec)<1)



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Name	
✓	Test Assessment3/Maximum_Lateral_Deviation_Assessment:verify(lateral_dev < 1)
✓	Lateral Acceleration Assessment/Global_Assessment:verify(duration(Lateral_acceleration>=2,sec)<=0.5)



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Simulation

System Under Test Information

Model:	Dynamic_obstacle_avoidance
Harness:	Avoidance_Real_Scenario
Harness Owner:	Dynamic_obstacle_avoidance/Subsystem
Release:	Current
Simulation Mode:	normal

Override SIL or PIL0

Mode:

Configuration Set:Configuration1

Start Time:0

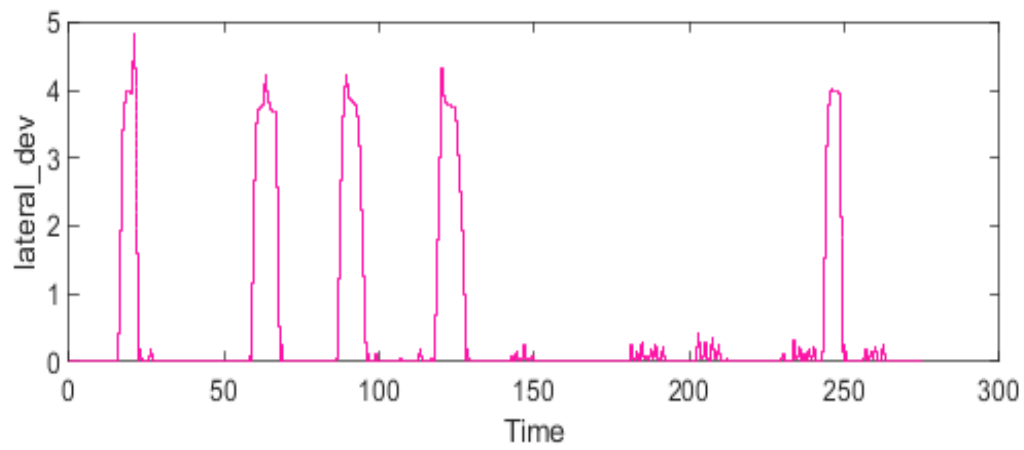
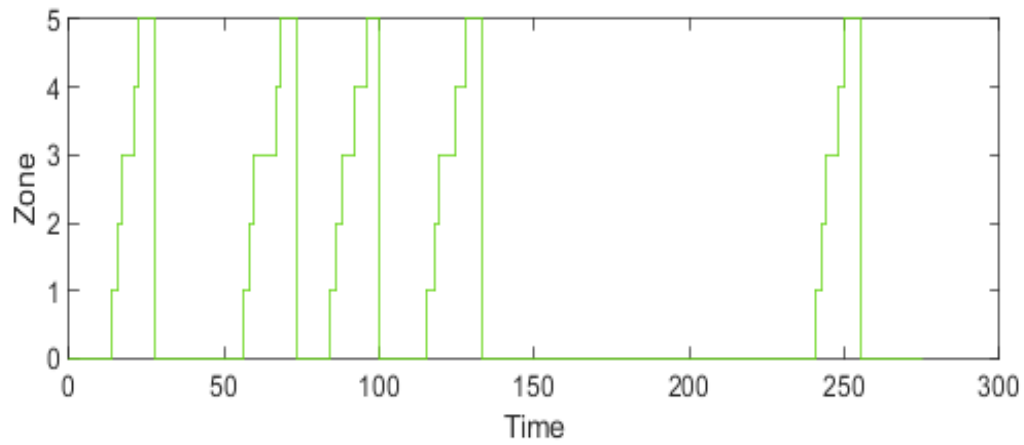
Stop Time:275.08204274327625

Checksum:3560003545 2638914006 1526288829 1442388740

Simulation Output

Name	Data Type	Units	Sample Time	Interp	Sync	Link to Plot
Zone	double		0.01	zoh	union	Link
lateral_dev	double		0.01	zoh	union	Link

Name	Data Type	Units	Sample Time	Interp	Sync
Zone	double		0.01	zoh	union
lateral_dev	double		0.01	zoh	union



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Puglia

Test Result Information

Result Type: Test Case Result
Parent: [Avoidance in real scenario \(Hyundai Azera\)](#)
Start Time: 10-Jun-2021 18:09:44

End Time: 10-Jun-2021 18:15:44
Outcome: Passed

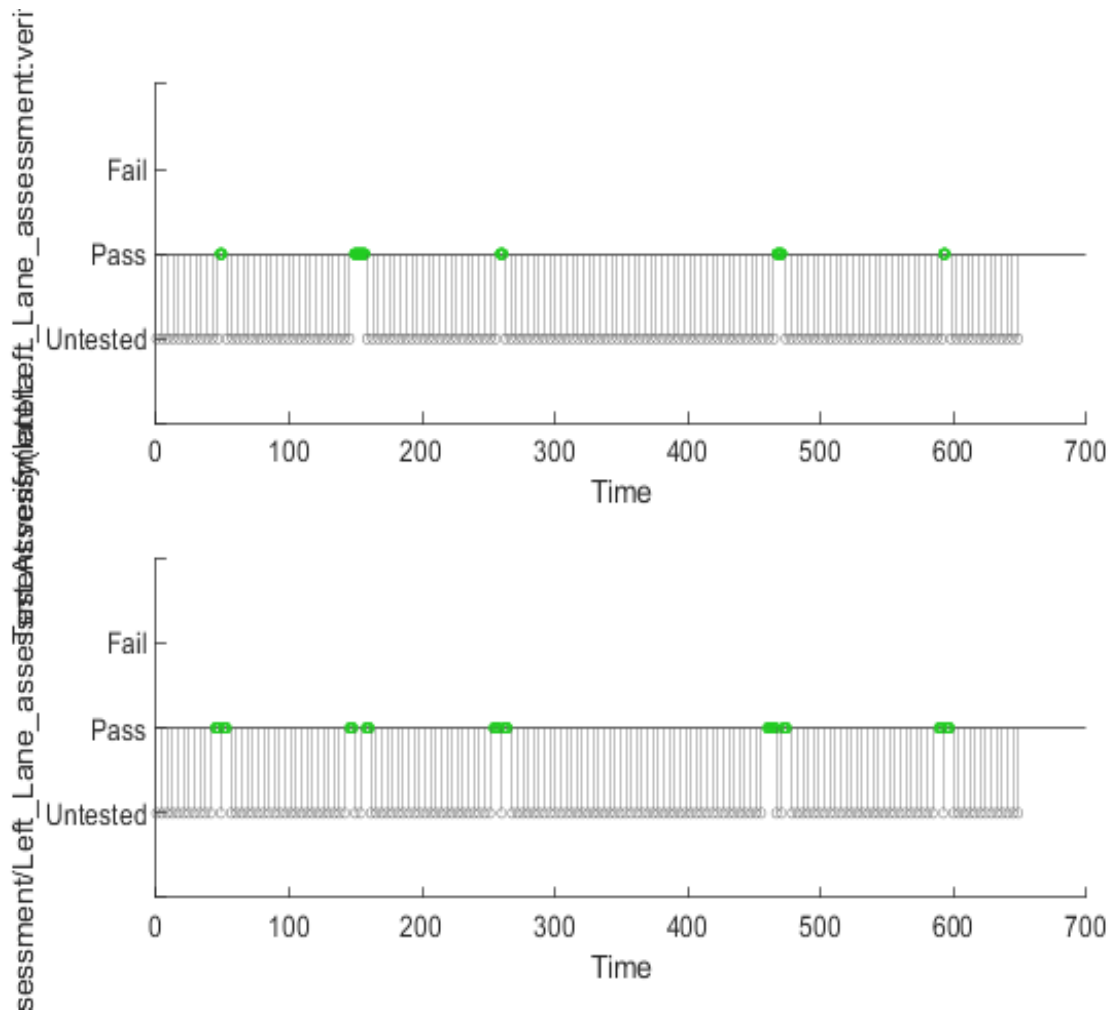
Test Case Information

Name: Puglia
Type: Simulation Test

Verify Result

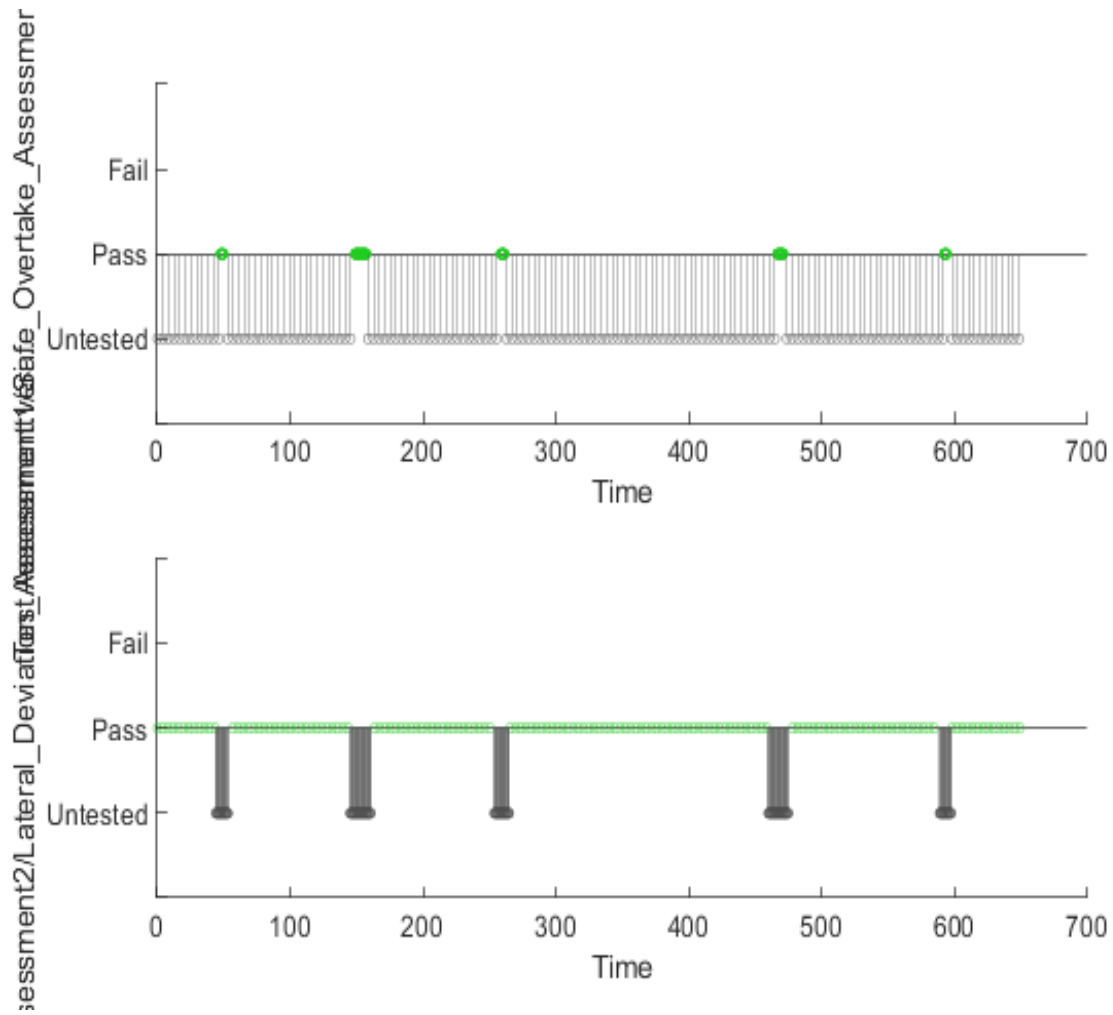
Name	Link to Plot
✓ Test Assessment/Left_Lane_assessment:verify(lateral_dev >= 2 && lateral_dev <= 6)	Link
✓ Test Assessment/Left_Lane_assessment:verify(lateral_dev < 6)	Link
✓ Test Assessment1/Safe_Overtake_Assessment:verify(duration(lateral_dev > 5 && lateral_dev < 3,sec)<1)	Link
✓ Test Assessment2/Lateral_Deviation_Assessment:verify(duration(lateral_dev > 0.75,sec)<1)	Link
✓ Test Assessment3/Maximum_Lateral_Deviation_Assessment:verify(lateral_dev < 1)	Link
✓ Lateral Acceleration Assessment/Global_Assessment:verify(duration(Lateral_acceleration>=2,sec)<=0.5)	Link

Name
✓ Test Assessment/Left_Lane_assessment:verify(lateral_dev >= 2 && lateral_dev <= 6)
✓ Test Assessment/Left_Lane_assessment:verify(lateral_dev < 6)



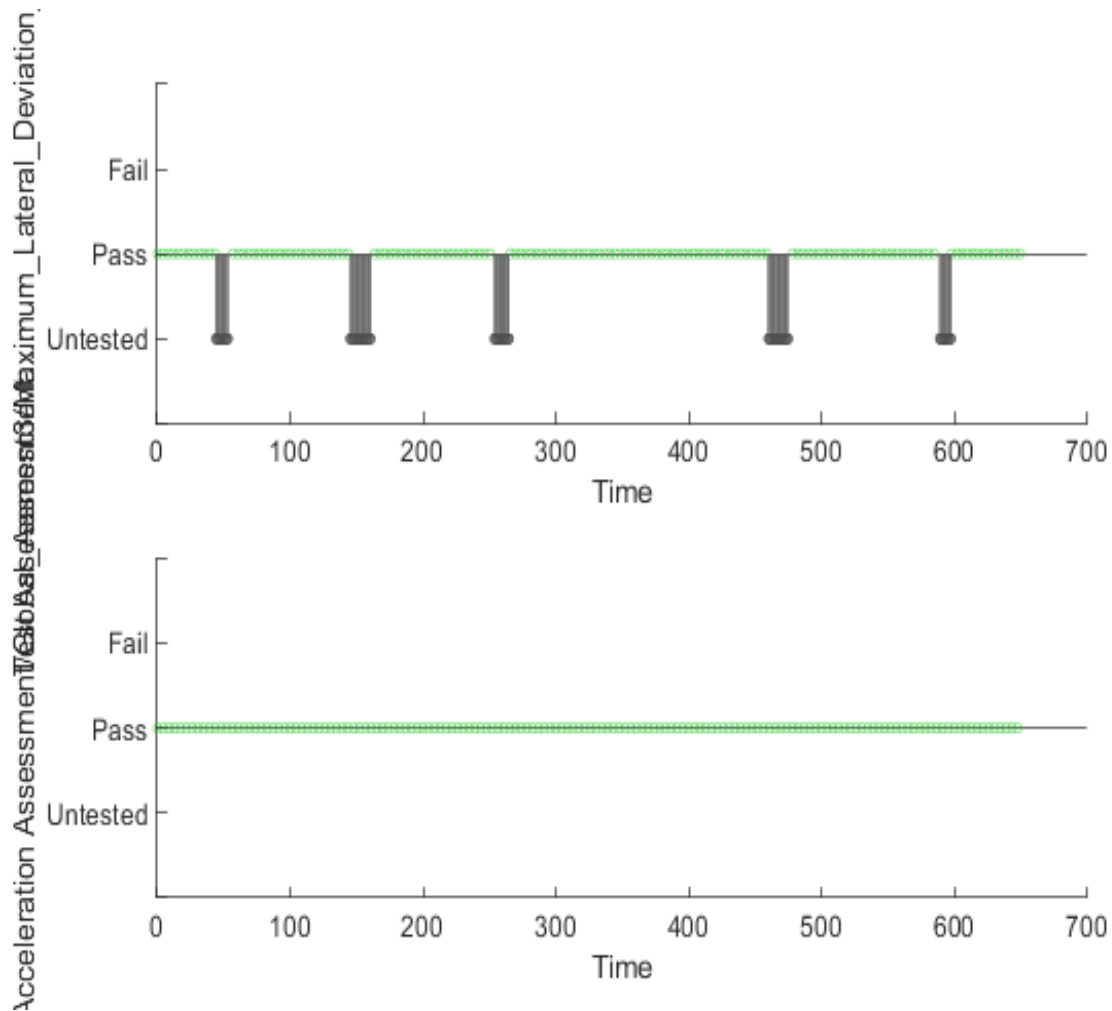
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Name	
✓	Test Assessment1/Safe_Overtake_Assessment:verify(duration(lateral_dev > 5 && lateral_dev < 3,sec)<1)
✓	Test Assessment2/Lateral_Deviation_Assessment:verify(duration(lateral_dev > 0.75,sec)<1)



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Name	
✓	Test Assessment3/Maximum_Lateral_Deviation_Assessment:verify(lateral_dev < 1)
✓	Lateral Acceleration Assessment/Global_Assessment:verify(duration(Lateral_acceleration>=2,sec)<=0.5)



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Simulation

System Under Test Information

Model:	Dynamic_obstacle_avoidance
Harness:	Avoidance_Real_Scenario
Harness Owner:	Dynamic_obstacle_avoidance/Subsystem
Release:	Current
Simulation Mode:	normal

Override SIL or PIL0

Mode:

Configuration Set:Configuration1

Start Time:0

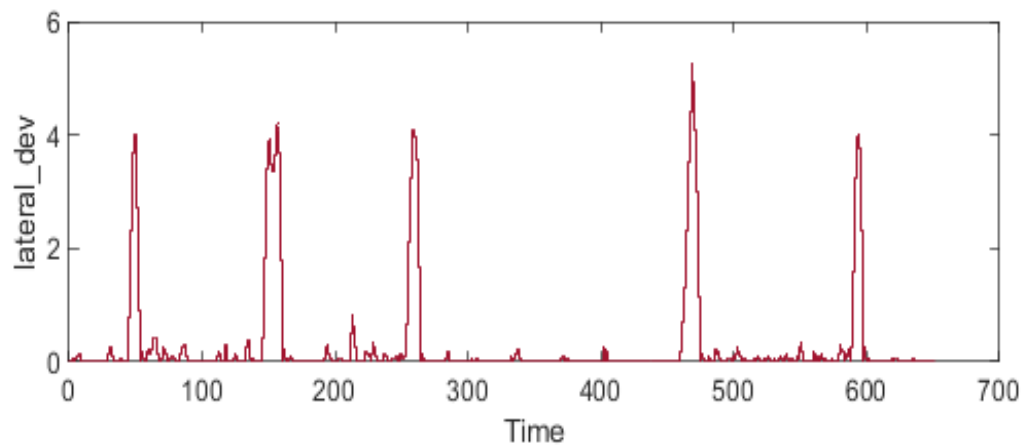
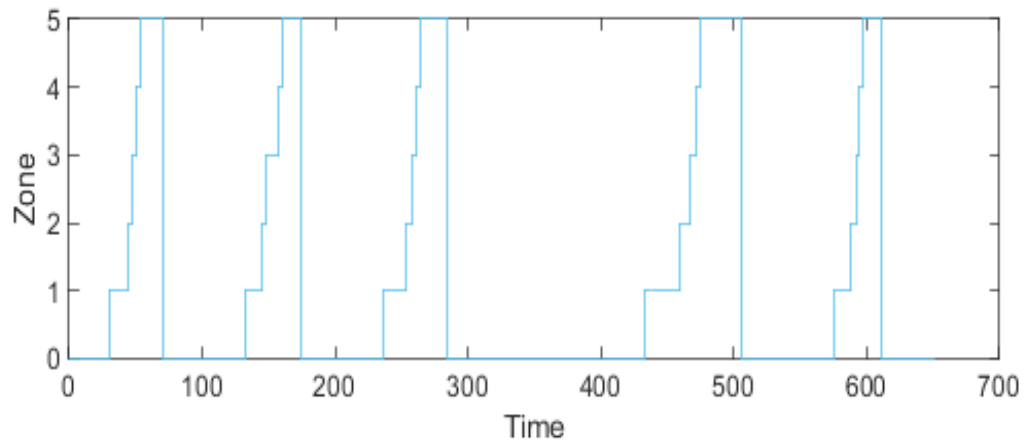
Stop Time:651.65546907329588

Checksum:3966393457 781830547 740493527 1266367321

Simulation Output

Name	Data Type	Units	Sample Time	Interp	Sync	Link to Plot
Zone	double		0.01	zoh	union	Link
lateral_dev	double		0.01	zoh	union	Link

Name	Data Type	Units	Sample Time	Interp	Sync
Zone	double		0.01	zoh	union
lateral_dev	double		0.01	zoh	union



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Indianapolis Motor Speedway

Test Result Information

Result Type: Test Case Result
Parent: [Avoidance in real scenario \(Hyundai Azera\)](#)
Start Time: 10-Jun-2021 18:15:45

End Time: 10-Jun-2021 18:16:42
Outcome: Passed

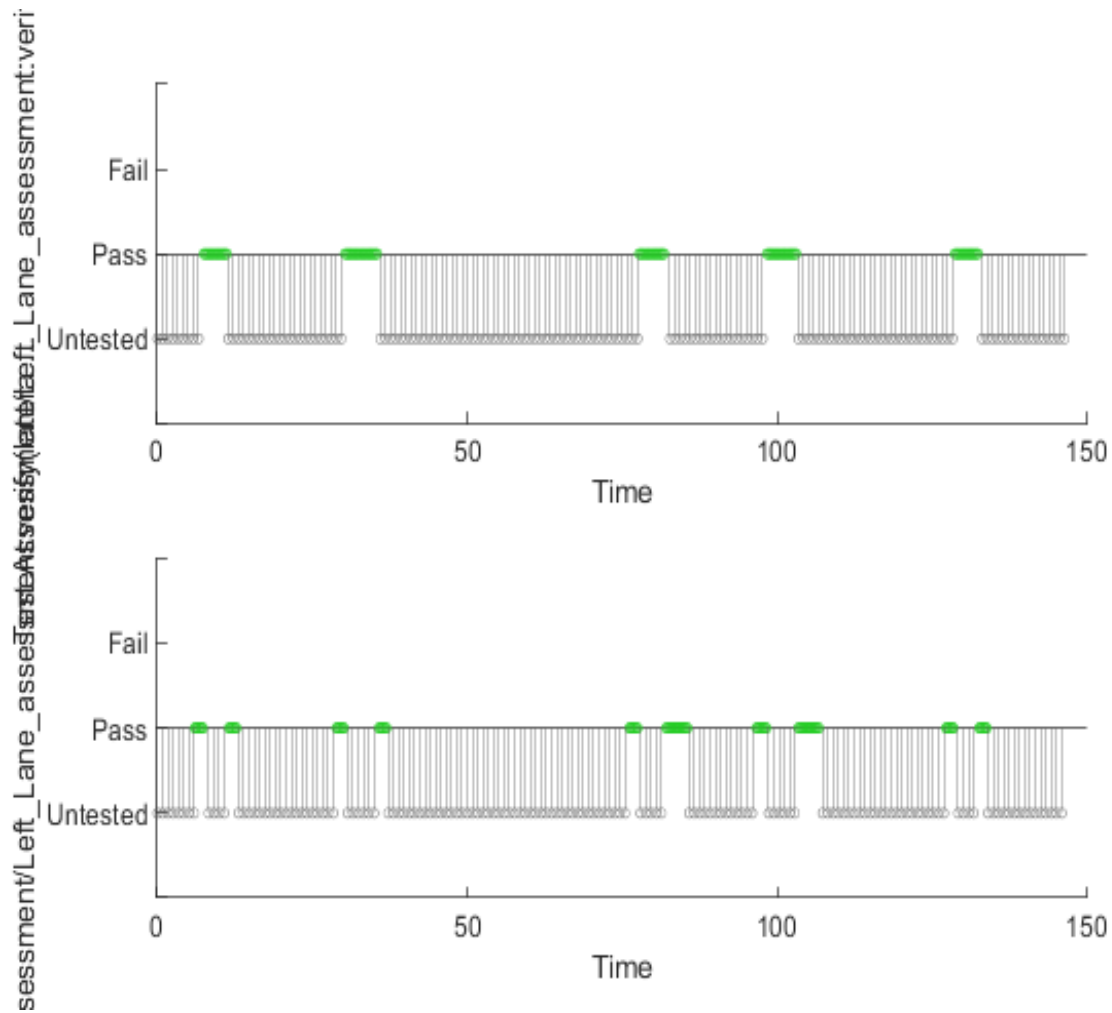
Test Case Information

Name: Indianapolis Motor Speedway
Type: Simulation Test

Verify Result

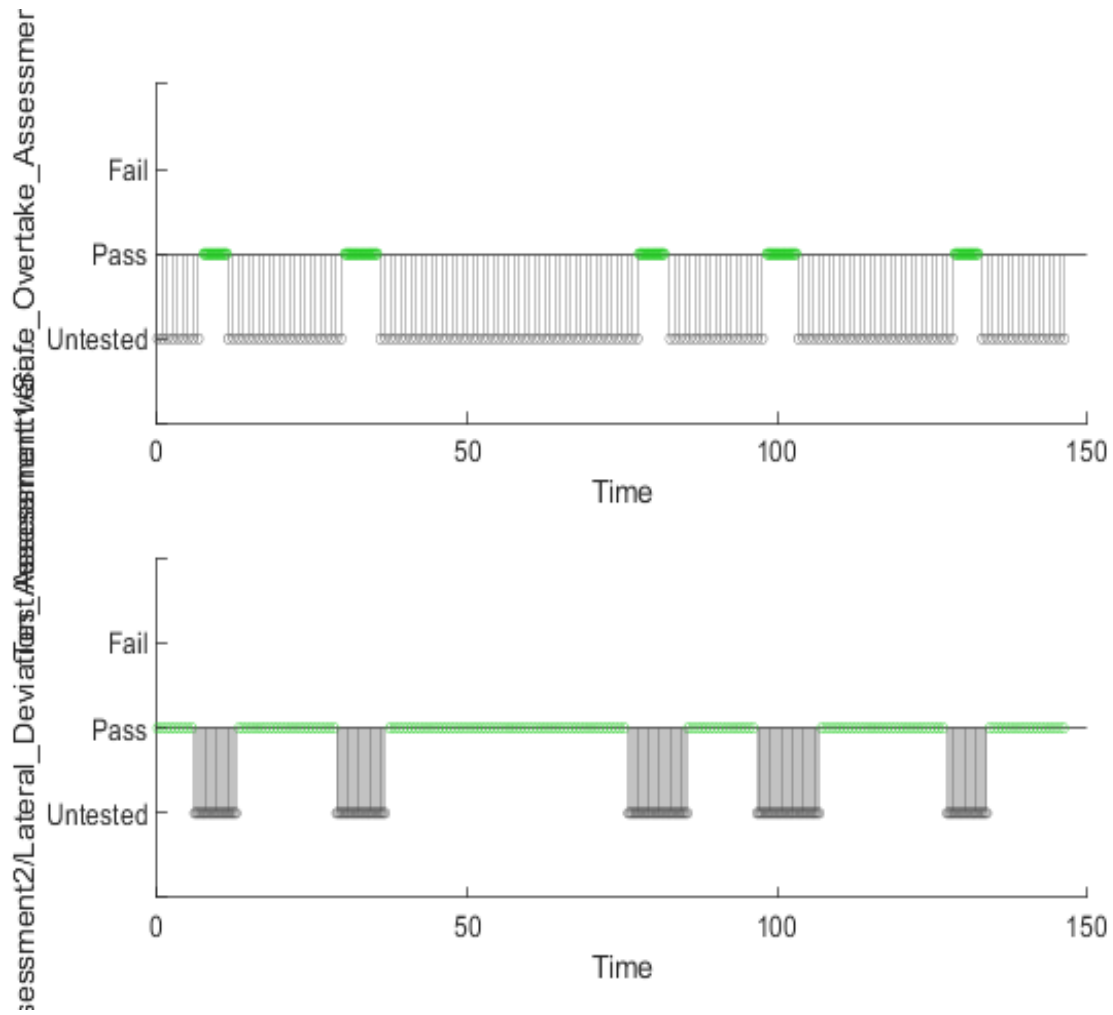
Name	Link to Plot
✓ Test Assessment/Left_Lane_assessment:verify(lateral_dev >= 2 && lateral_dev <= 6)	Link
✓ Test Assessment/Left_Lane_assessment:verify(lateral_dev < 6)	Link
✓ Test Assessment1/Safe_Overtake_Assessment:verify(duration(lateral_dev > 5 && lateral_dev < 3,sec)<1)	Link
✓ Test Assessment2/Lateral_Deviation_Assessment:verify(duration(lateral_dev > 0.75,sec)<1)	Link
✓ Test Assessment3/Maximum_Lateral_Deviation_Assessment:verify(lateral_dev < 1)	Link
✓ Lateral Acceleration Assessment/Global_Assessment:verify(duration(Lateral_acceleration>=2,sec)<=0.5)	Link

Name
✓ Test Assessment/Left_Lane_assessment:verify(lateral_dev >= 2 && lateral_dev <= 6)
✓ Test Assessment/Left_Lane_assessment:verify(lateral_dev < 6)



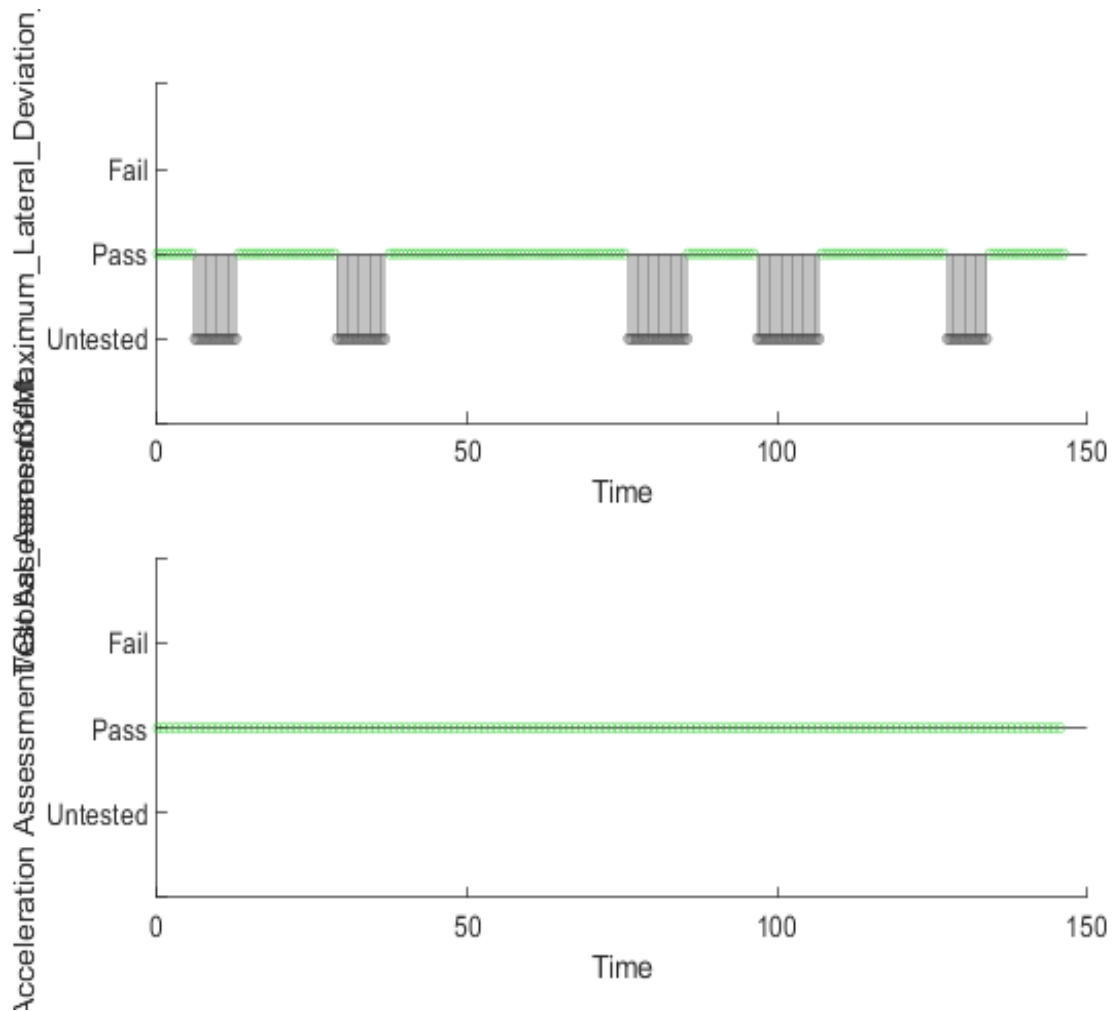
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Name	
✓	Test Assessment1/Safe_Overtake_Assessment:verify(duration(lateral_dev > 5 && lateral_dev < 3,sec)<1)
✓	Test Assessment2/Lateral_Deviation_Assessment:verify(duration(lateral_dev > 0.75,sec)<1)



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Name	
✓	Test Assessment3/Maximum_Lateral_Deviation_Assessment:verify(lateral_dev < 1)
✓	Lateral Acceleration Assessment/Global_Assessment:verify(duration(Lateral_acceleration>=2,sec)<=0.5)



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Simulation

System Under Test Information

Model:	Dynamic_obstacle_avoidance
Harness:	Avoidance_Real_Scenario
Harness Owner:	Dynamic_obstacle_avoidance/Subsystem
Release:	Current
Simulation Mode:	normal

Override SIL or PIL0

Mode:

Configuration Set:Configuration1

Start Time:0

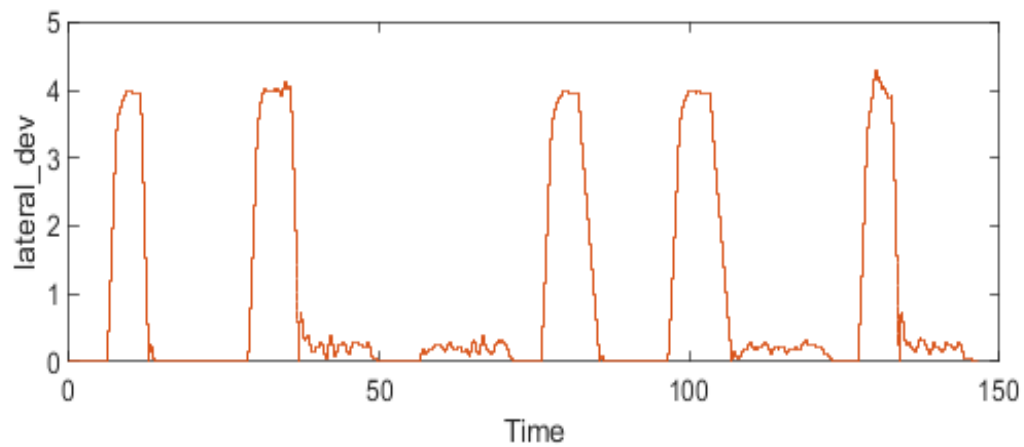
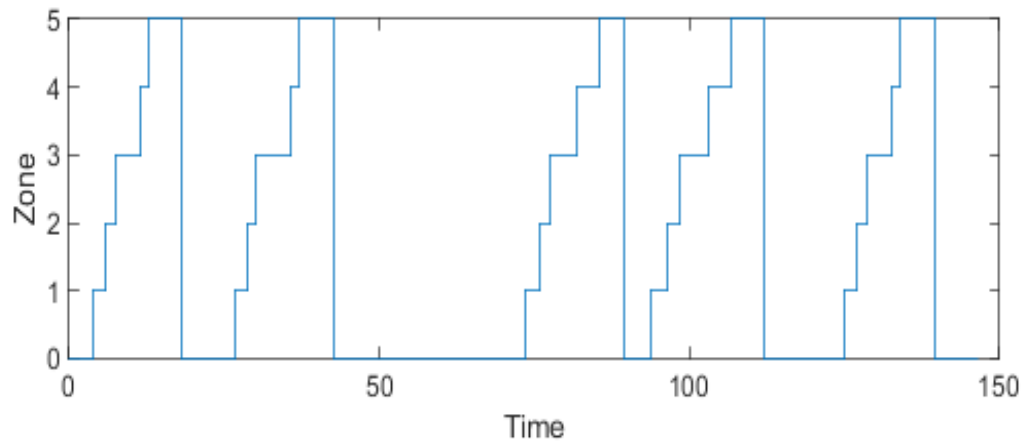
Stop Time:146.51791178475014

Checksum:206311103 3317914342 182976386 2468747102

Simulation Output

Name	Data Type	Units	Sample Time	Interp	Sync	Link to Plot
Zone	double		0.01	zoh	union	Link
lateral_dev	double		0.01	zoh	union	Link

Name	Data Type	Units	Sample Time	Interp	Sync
Zone	double		0.01	zoh	union
lateral_dev	double		0.01	zoh	union



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Avoidance in real scenario (BMW 325i)

Test Result Information

Result Type: Test Suite Result
Parent: [Avoidance real scenario](#)
Start Time: 10-Jun-2021 18:16:43

End Time: 10-Jun-2021 18:28:42
Outcome: Total: 3, **Passed: 3**

Test Suite Information

Name: Avoidance in real scenario (BMW 325i)

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A14 Highway

Test Result Information

Result Type: Test Case Result
Parent: [Avoidance in real scenario \(BMW 325i\)](#)
Start Time: 10-Jun-2021 18:16:43
End Time: 10-Jun-2021 18:18:48
Outcome: **Passed**

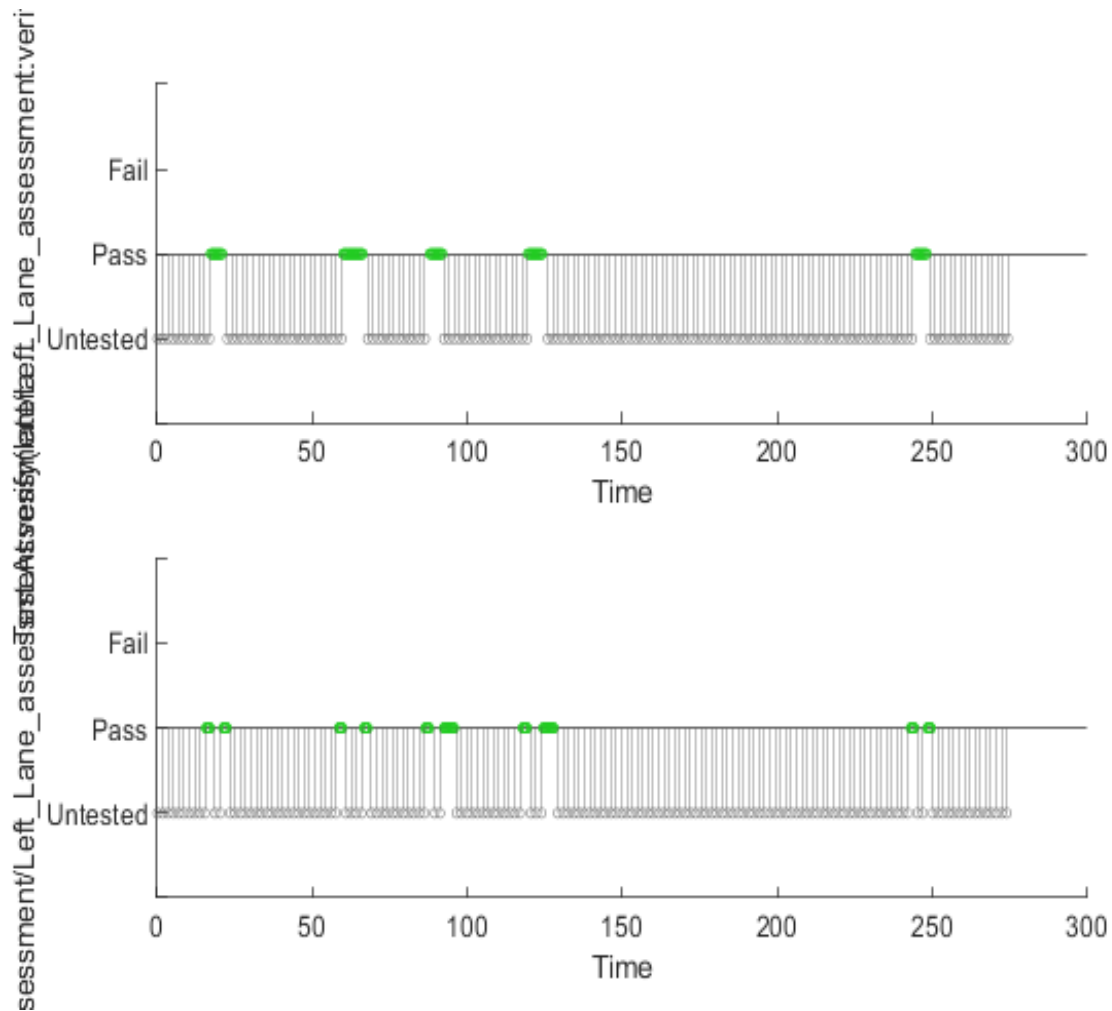
Test Case Information

Name: A14 Highway
Type: Simulation Test

Verify Result

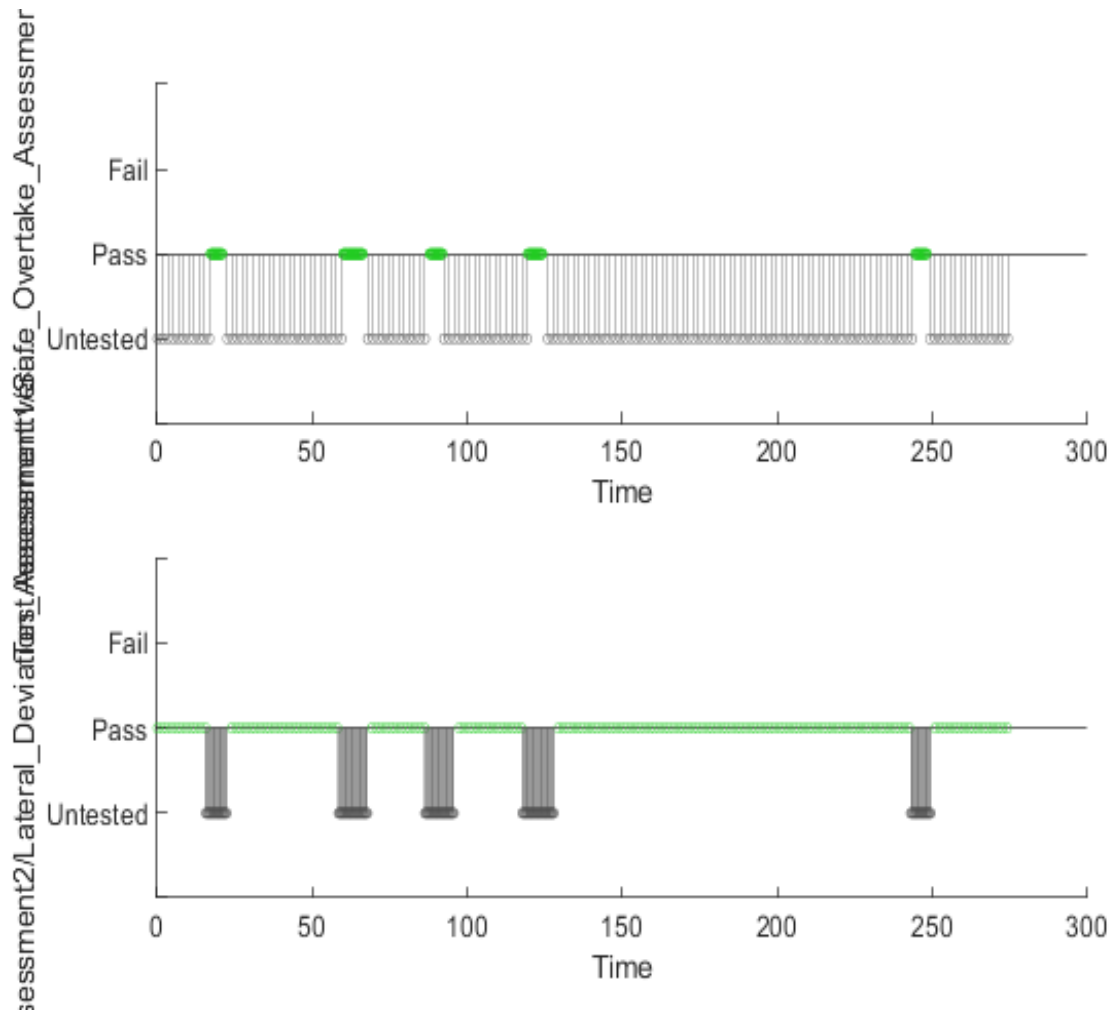
Name	Link to Plot
✓ Test Assessment/Left_Lane_assessment:verify(lateral_dev >= 2 && lateral_dev <= 6)	Link
✓ Test Assessment/Left_Lane_assessment:verify(lateral_dev < 6)	Link
✓ Test Assessment1/Safe_Overtake_Assessment:verify(duration(lateral_dev > 5 && lateral_dev < 3,sec)<1)	Link
✓ Test Assessment2/Lateral_Deviation_Assessment:verify(duration(lateral_dev > 0.75,sec)<1)	Link
✓ Test Assessment3/Maximum_Lateral_Deviation_Assessment:verify(lateral_dev < 1)	Link
✓ Lateral Acceleration Assessment/Global_Assessment:verify(duration(Lateral_acceleration>=2,sec)<=0.5)	Link

Name
✓ Test Assessment/Left_Lane_assessment:verify(lateral_dev >= 2 && lateral_dev <= 6)
✓ Test Assessment/Left_Lane_assessment:verify(lateral_dev < 6)



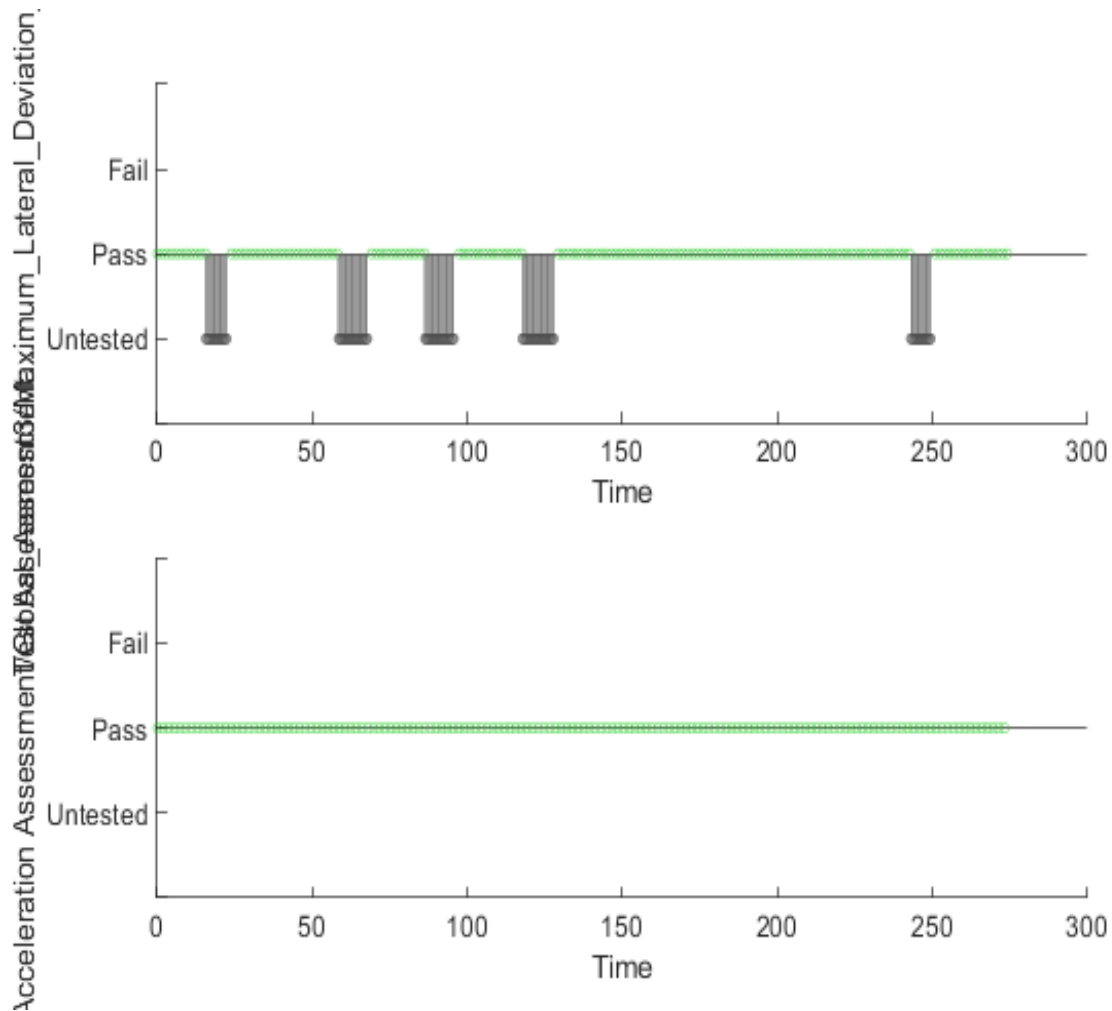
[Back to Report Summary](#)[Back to Signal Summary](#)

Name	
✓	Test Assessment1/Safe_Overtake_Assessment:verify(duration(lateral_dev > 5 && lateral_dev < 3,sec)<1)
✓	Test Assessment2/Lateral_Deviation_Assessment:verify(duration(lateral_dev > 0.75,sec)<1)



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Name	
✓	Test Assessment3/Maximum_Lateral_Deviation_Assessment:verify(lateral_dev < 1)
✓	Lateral Acceleration Assessment/Global_Assessment:verify(duration(Lateral_acceleration>=2,sec)<=0.5)



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Simulation

System Under Test Information

Model:	Dynamic_obstacle_avoidance
Harness:	Avoidance_Real_Scenario
Harness Owner:	Dynamic_obstacle_avoidance/Subsystem
Release:	Current
Simulation Mode:	normal

Override SIL or PIL0

Mode:

Configuration Set:Configuration1

Start Time:0

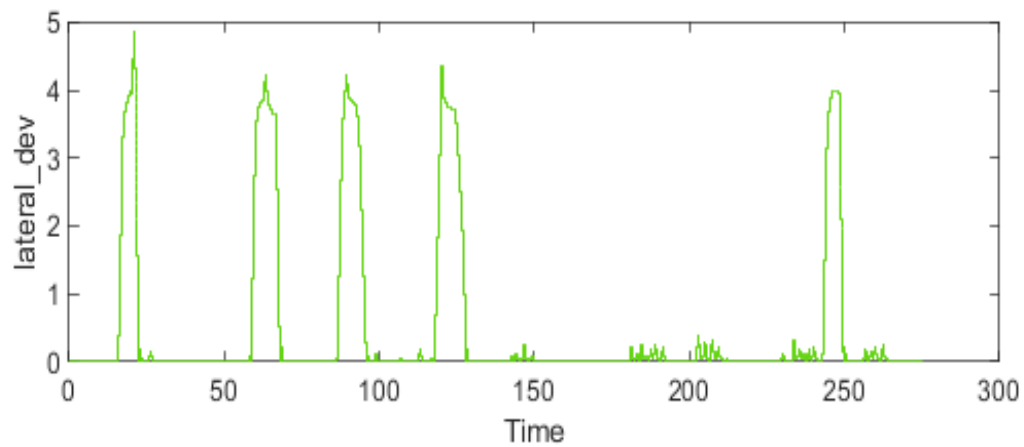
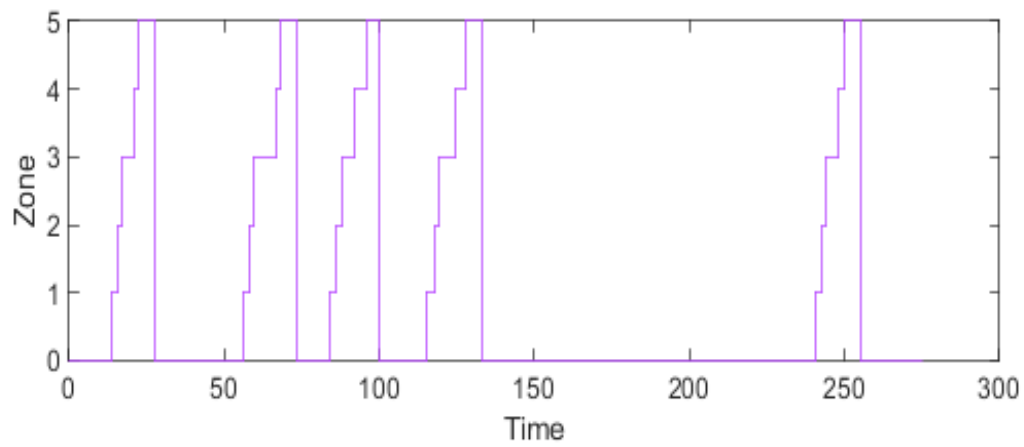
Stop Time:275.08204274327625

Checksum:3560003545 2638914006 1526288829 1442388740

Simulation Output

Name	Data Type	Units	Sample Time	Interp	Sync	Link to Plot
Zone	double		0.01	zoh	union	Link
lateral_dev	double		0.01	zoh	union	Link

Name	Data Type	Units	Sample Time	Interp	Sync
Zone	double		0.01	zoh	union
lateral_dev	double		0.01	zoh	union



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Puglia

Test Result Information

Result Type: Test Case Result
Parent: [Avoidance in real scenario \(BMW 325i\)](#)
Start Time: 10-Jun-2021 18:18:49

End Time: 10-Jun-2021 18:27:33
Outcome: Passed

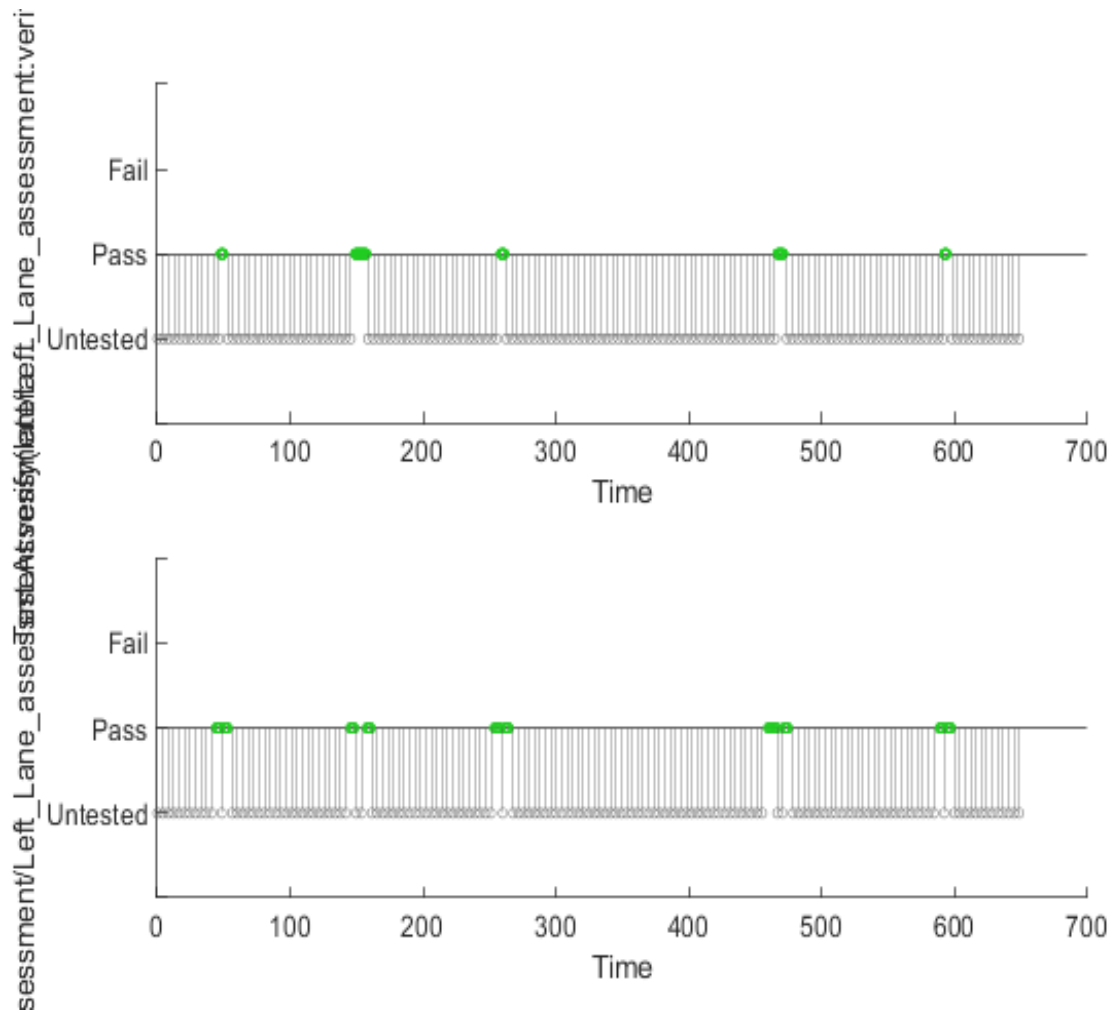
Test Case Information

Name: Puglia
Type: Simulation Test

Verify Result

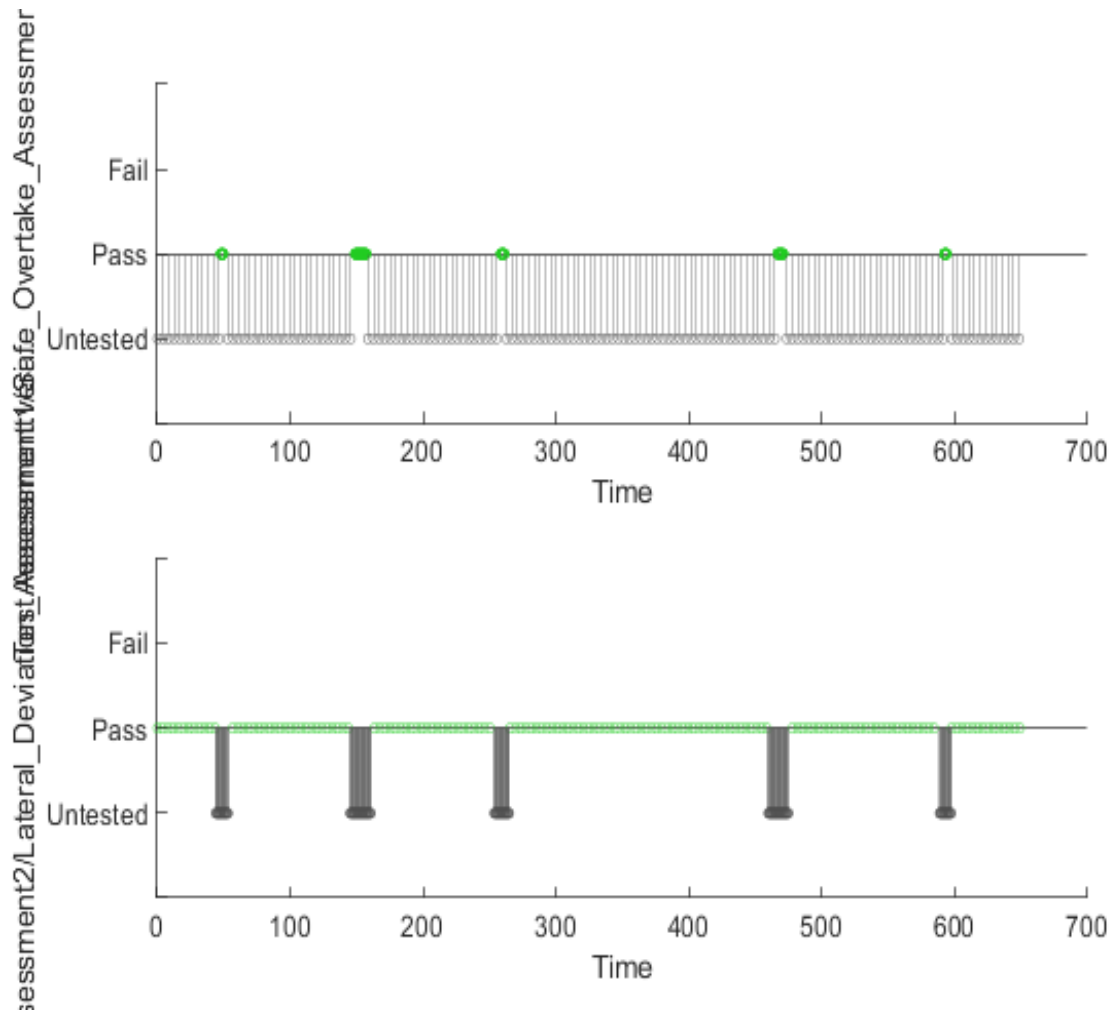
Name	Link to Plot
✓ Test Assessment/Left_Lane_assessment:verify(lateral_dev >= 2 && lateral_dev <= 6)	Link
✓ Test Assessment/Left_Lane_assessment:verify(lateral_dev < 6)	Link
✓ Test Assessment1/Safe_Overtake_Assessment:verify(duration(lateral_dev > 5 && lateral_dev < 3,sec)<1)	Link
✓ Test Assessment2/Lateral_Deviation_Assessment:verify(duration(lateral_dev > 0.75,sec)<1)	Link
✓ Test Assessment3/Maximum_Lateral_Deviation_Assessment:verify(lateral_dev < 1)	Link
✓ Lateral Acceleration Assessment/Global_Assessment:verify(duration(Lateral_acceleration>=2,sec)<=0.5)	Link

Name
✓ Test Assessment/Left_Lane_assessment:verify(lateral_dev >= 2 && lateral_dev <= 6)
✓ Test Assessment/Left_Lane_assessment:verify(lateral_dev < 6)



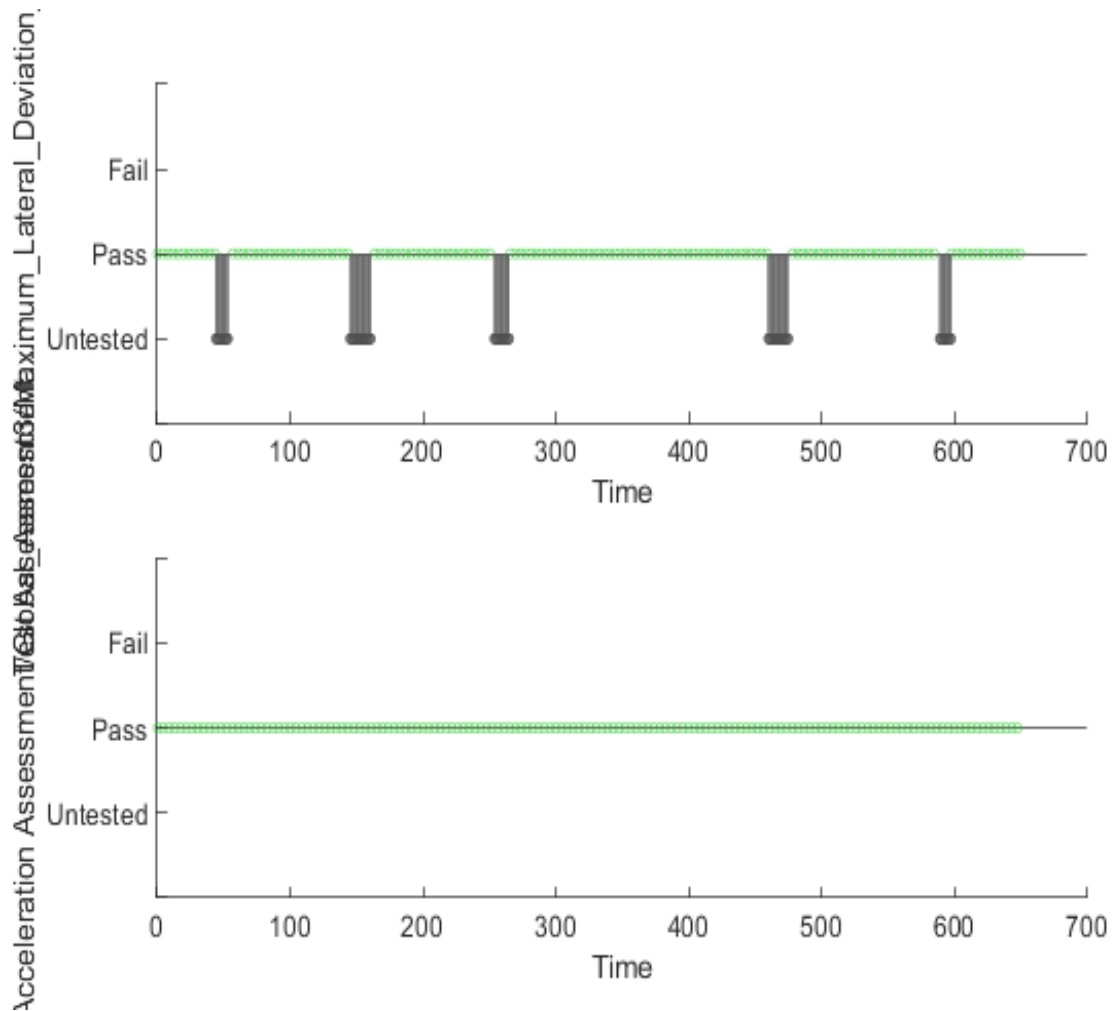
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Name	
✓	Test Assessment1/Safe_Overtake_Assessment:verify(duration(lateral_dev > 5 && lateral_dev < 3,sec)<1)
✓	Test Assessment2/Lateral_Deviation_Assessment:verify(duration(lateral_dev > 0.75,sec)<1)



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Name	
✓	Test Assessment3/Maximum_Lateral_Deviation_Assessment:verify(lateral_dev < 1)
✓	Lateral Acceleration Assessment/Global_Assessment:verify(duration(Lateral_acceleration>=2,sec)<=0.5)



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Simulation

System Under Test Information

Model:	Dynamic_obstacle_avoidance
Harness:	Avoidance_Real_Scenario
Harness Owner:	Dynamic_obstacle_avoidance/Subsystem
Release:	Current
Simulation Mode:	normal

Override SIL or PIL0

Mode:

Configuration Set:Configuration1

Start Time:0

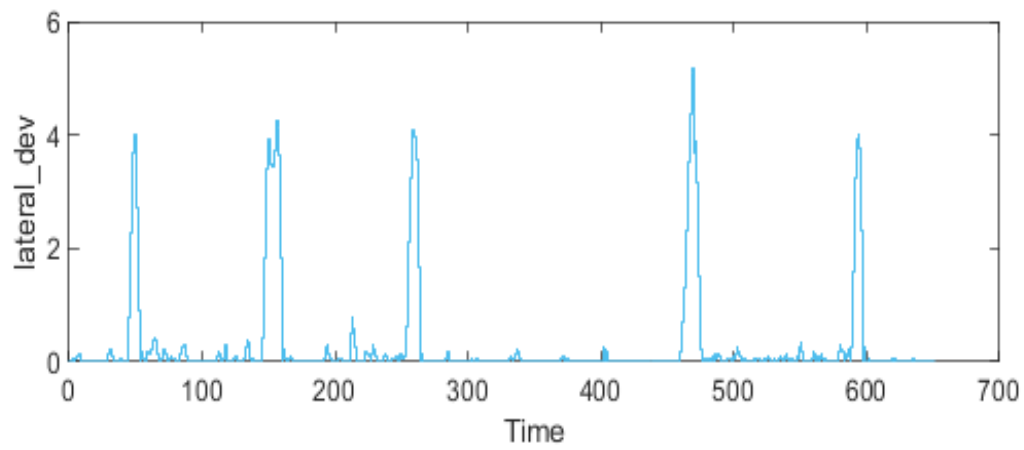
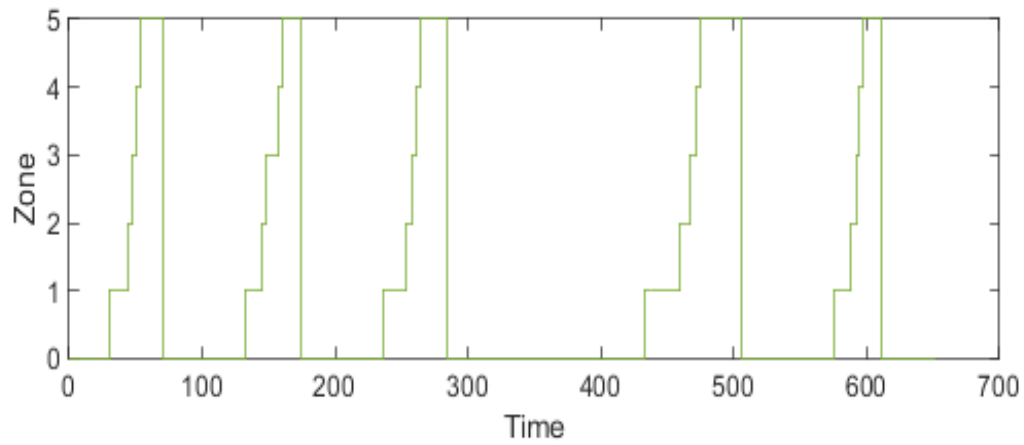
Stop Time:651.65546907329588

Checksum:3966393457 781830547 740493527 1266367321

Simulation Output

Name	Data Type	Units	Sample Time	Interp	Sync	Link to Plot
Zone	double		0.01	zoh	union	Link
lateral_dev	double		0.01	zoh	union	Link

Name	Data Type	Units	Sample Time	Interp	Sync
Zone	double		0.01	zoh	union
lateral_dev	double		0.01	zoh	union



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Indianapolis Motor Speedway

Test Result Information

Result Type: Test Case Result
Parent: [Avoidance in real scenario \(BMW 325i\)](#)
Start Time: 10-Jun-2021 18:27:33

End Time: 10-Jun-2021 18:28:42
Outcome: Passed

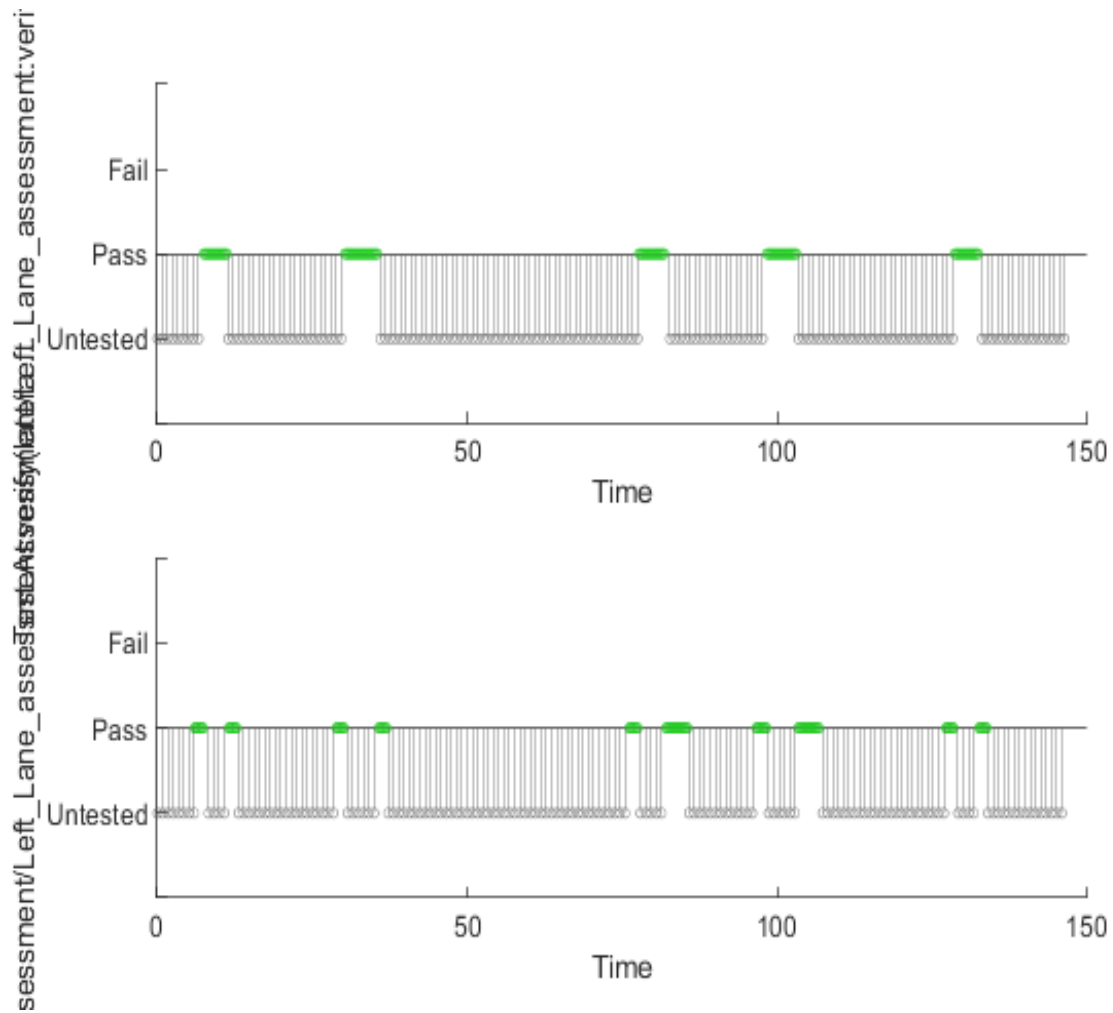
Test Case Information

Name: Indianapolis Motor Speedway
Type: Simulation Test

Verify Result

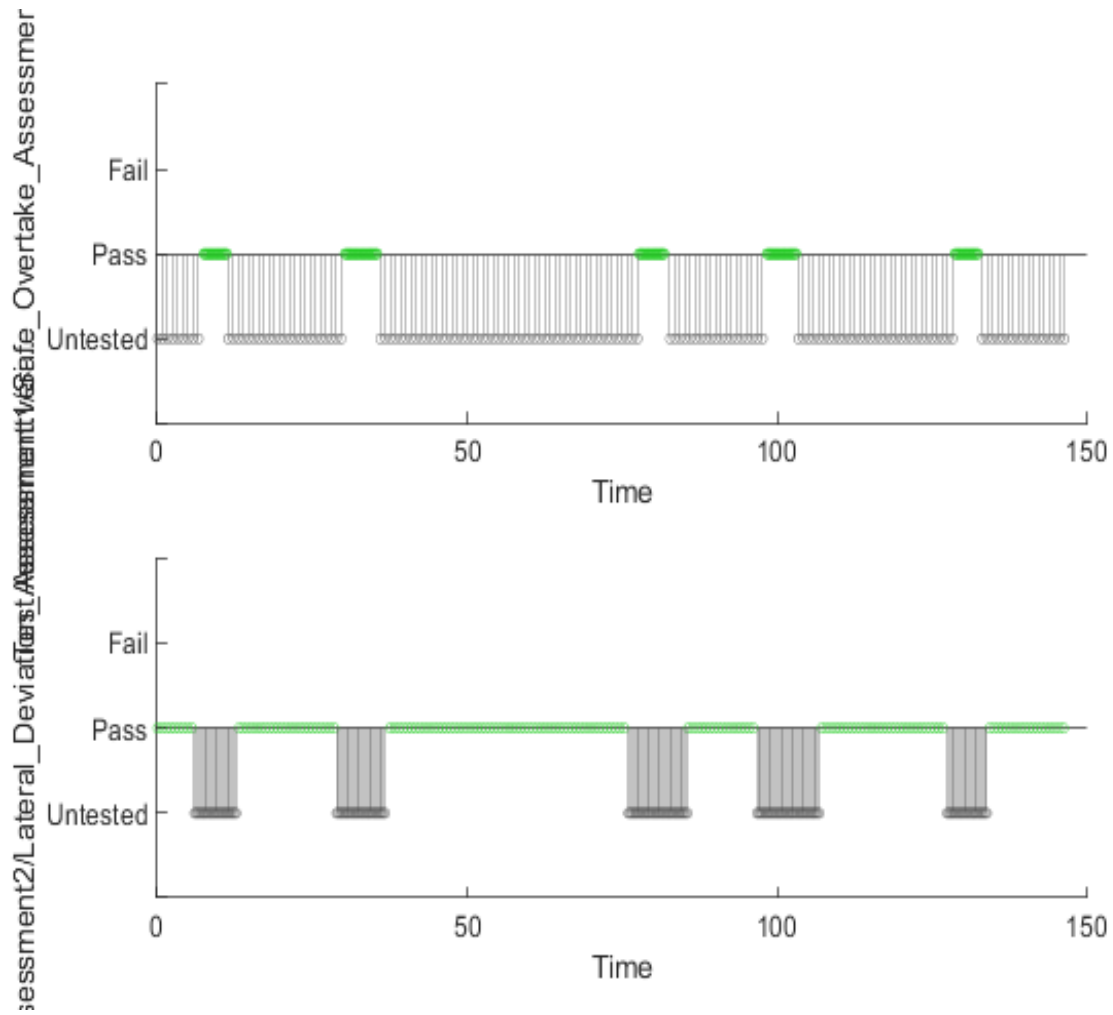
Name	Link to Plot
✓ Test Assessment/Left_Lane_assessment:verify(lateral_dev >= 2 && lateral_dev <= 6)	Link
✓ Test Assessment/Left_Lane_assessment:verify(lateral_dev < 6)	Link
✓ Test Assessment1/Safe_Overtake_Assessment:verify(duration(lateral_dev > 5 && lateral_dev < 3,sec)<1)	Link
✓ Test Assessment2/Lateral_Deviation_Assessment:verify(duration(lateral_dev > 0.75,sec)<1)	Link
✓ Test Assessment3/Maximum_Lateral_Deviation_Assessment:verify(lateral_dev < 1)	Link
✓ Lateral Acceleration Assessment/Global_Assessment:verify(duration(Lateral_acceleration>=2,sec)<=0.5)	Link

Name
✓ Test Assessment/Left_Lane_assessment:verify(lateral_dev >= 2 && lateral_dev <= 6)
✓ Test Assessment/Left_Lane_assessment:verify(lateral_dev < 6)



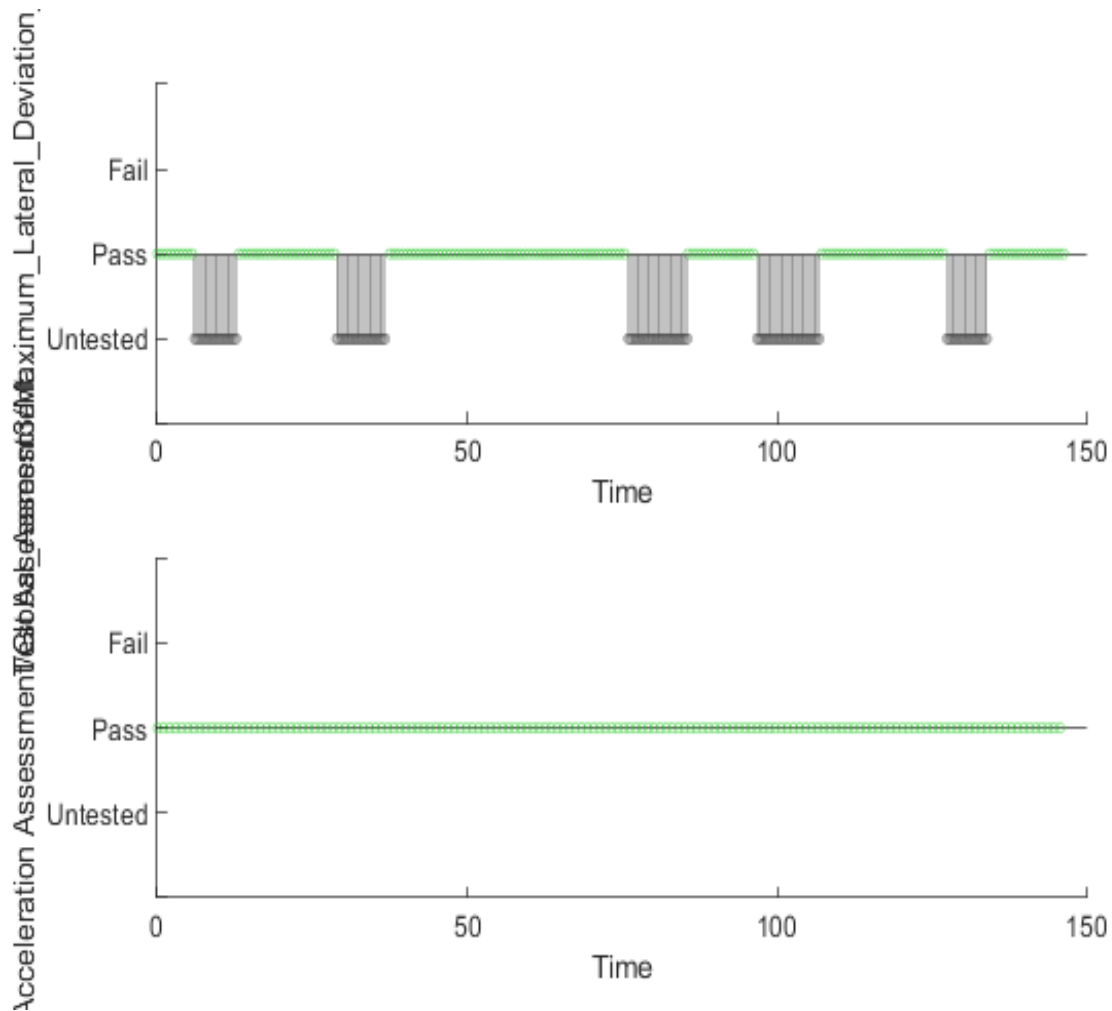
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Name	
✓	Test Assessment1/Safe_Overtake_Assessment:verify(duration(lateral_dev > 5 && lateral_dev < 3,sec)<1)
✓	Test Assessment2/Lateral_Deviation_Assessment:verify(duration(lateral_dev > 0.75,sec)<1)



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Name	
✔	Test Assessment3/Maximum_Lateral_Deviation_Assessment:verify(lateral_dev < 1)
✔	Lateral Acceleration Assessment/Global_Assessment:verify(duration(Lateral_acceleration>=2,sec)<=0.5)



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Simulation

System Under Test Information

Model:	Dynamic_obstacle_avoidance
Harness:	Avoidance_Real_Scenario
Harness Owner:	Dynamic_obstacle_avoidance/Subsystem
Release:	Current
Simulation Mode:	normal

Override SIL or PIL0

Mode:

Configuration Set:Configuration1

Start Time:0

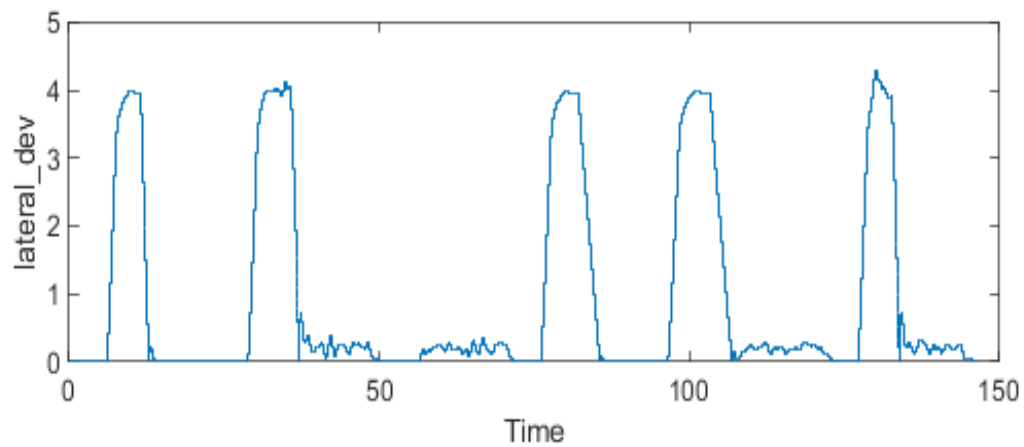
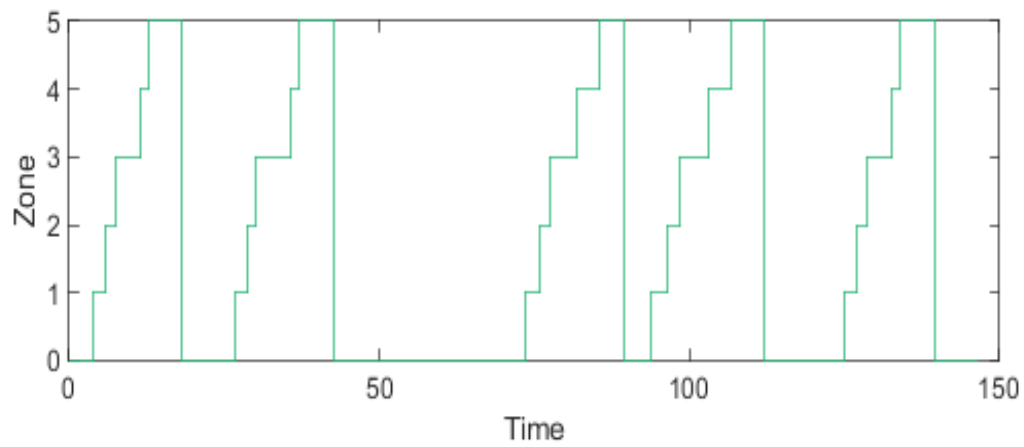
Stop Time:146.51791178475014

Checksum:206311103 3317914342 182976386 2468747102

Simulation Output

Name	Data Type	Units	Sample Time	Interp	Sync	Link to Plot
Zone	double		0.01	zoh	union	Link
lateral_dev	double		0.01	zoh	union	Link

Name	Data Type	Units	Sample Time	Interp	Sync
Zone	double		0.01	zoh	union
lateral_dev	double		0.01	zoh	union



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Avoidance in real scenario (Ford E150)

Test Result Information

Result Type: Test Suite Result
Parent: [Avoidance real scenario](#)
Start Time: 10-Jun-2021 18:28:43

End Time: 10-Jun-2021 18:33:28
Outcome: Total: 3, **Passed: 3**

Test Suite Information

Name: Avoidance in real scenario (Ford E150)

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A14 Highway

Test Result Information

Result Type: Test Case Result
Parent: [Avoidance in real scenario \(Ford E150\)](#)
Start Time: 10-Jun-2021 18:28:43
End Time: 10-Jun-2021 18:30:04
Outcome: **Passed**

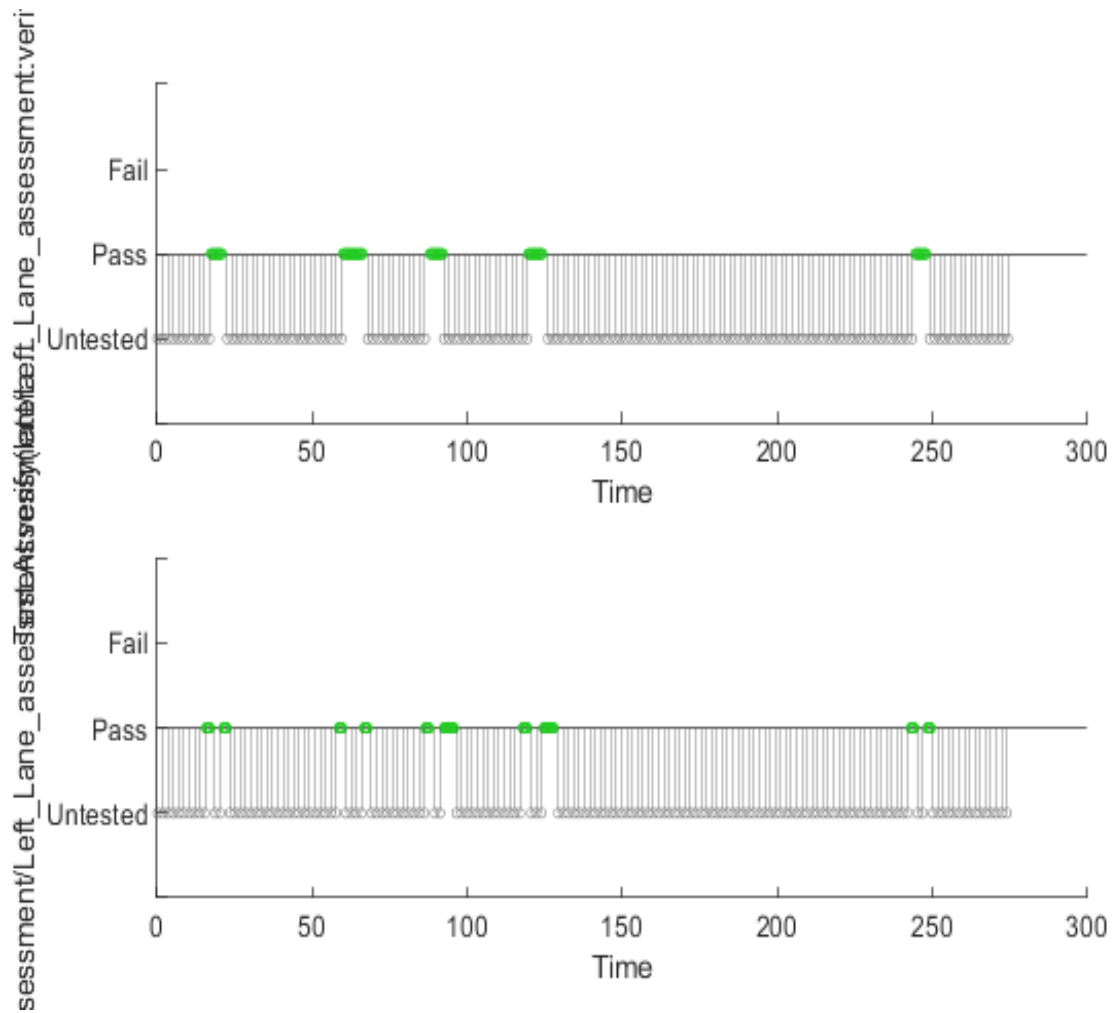
Test Case Information

Name: A14 Highway
Type: Simulation Test

Verify Result

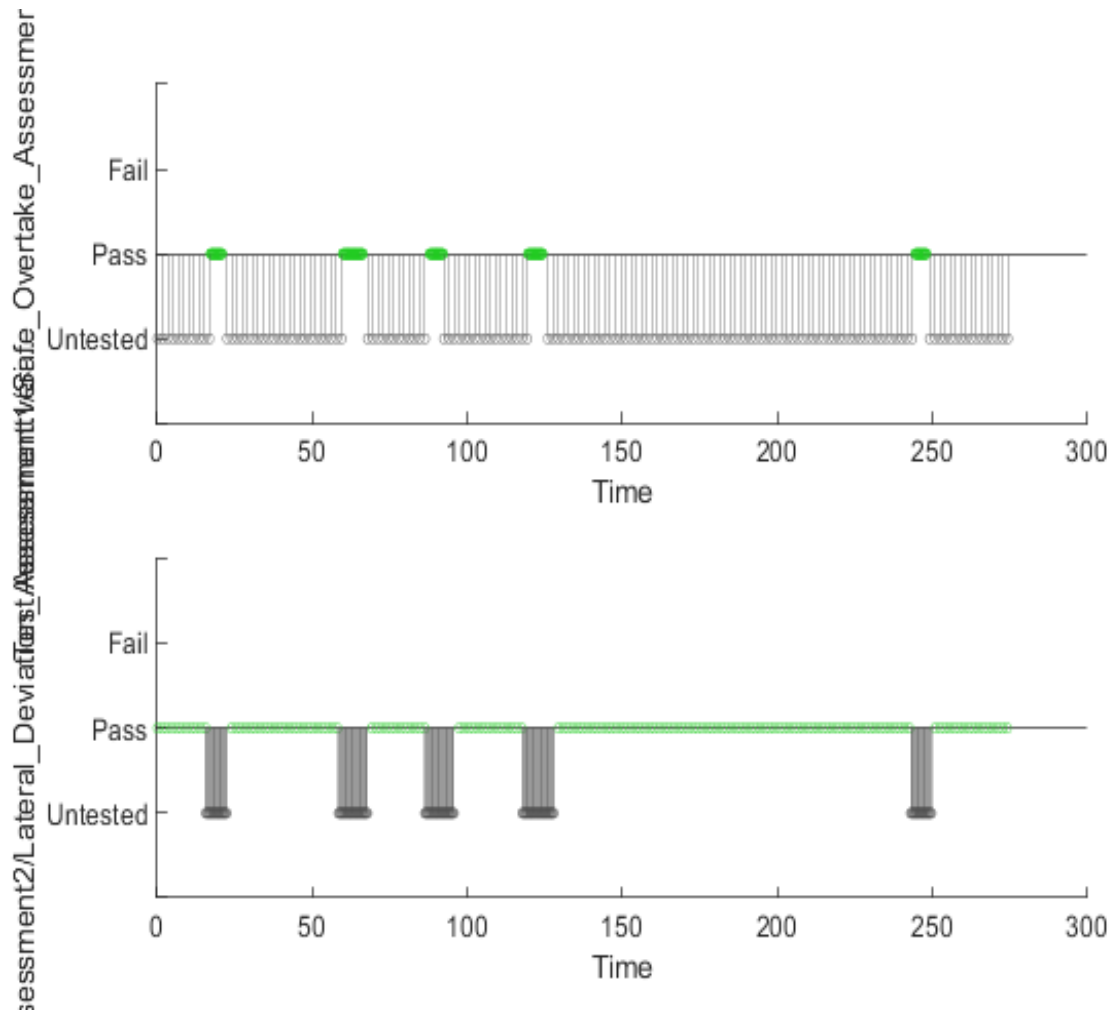
Name	Link to Plot
✓ Test Assessment/Left_Lane_assessment:verify(lateral_dev >= 2 && lateral_dev <= 6)	Link
✓ Test Assessment/Left_Lane_assessment:verify(lateral_dev < 6)	Link
✓ Test Assessment1/Safe_Overtake_Assessment:verify(duration(lateral_dev > 5 && lateral_dev < 3,sec)<1)	Link
✓ Test Assessment2/Lateral_Deviation_Assessment:verify(duration(lateral_dev > 0.75,sec)<1)	Link
✓ Test Assessment3/Maximum_Lateral_Deviation_Assessment:verify(lateral_dev < 1)	Link
✓ Lateral Acceleration Assessment/Global_Assessment:verify(duration(Lateral_acceleration>=2,sec)<=0.5)	Link

Name
✓ Test Assessment/Left_Lane_assessment:verify(lateral_dev >= 2 && lateral_dev <= 6)
✓ Test Assessment/Left_Lane_assessment:verify(lateral_dev < 6)



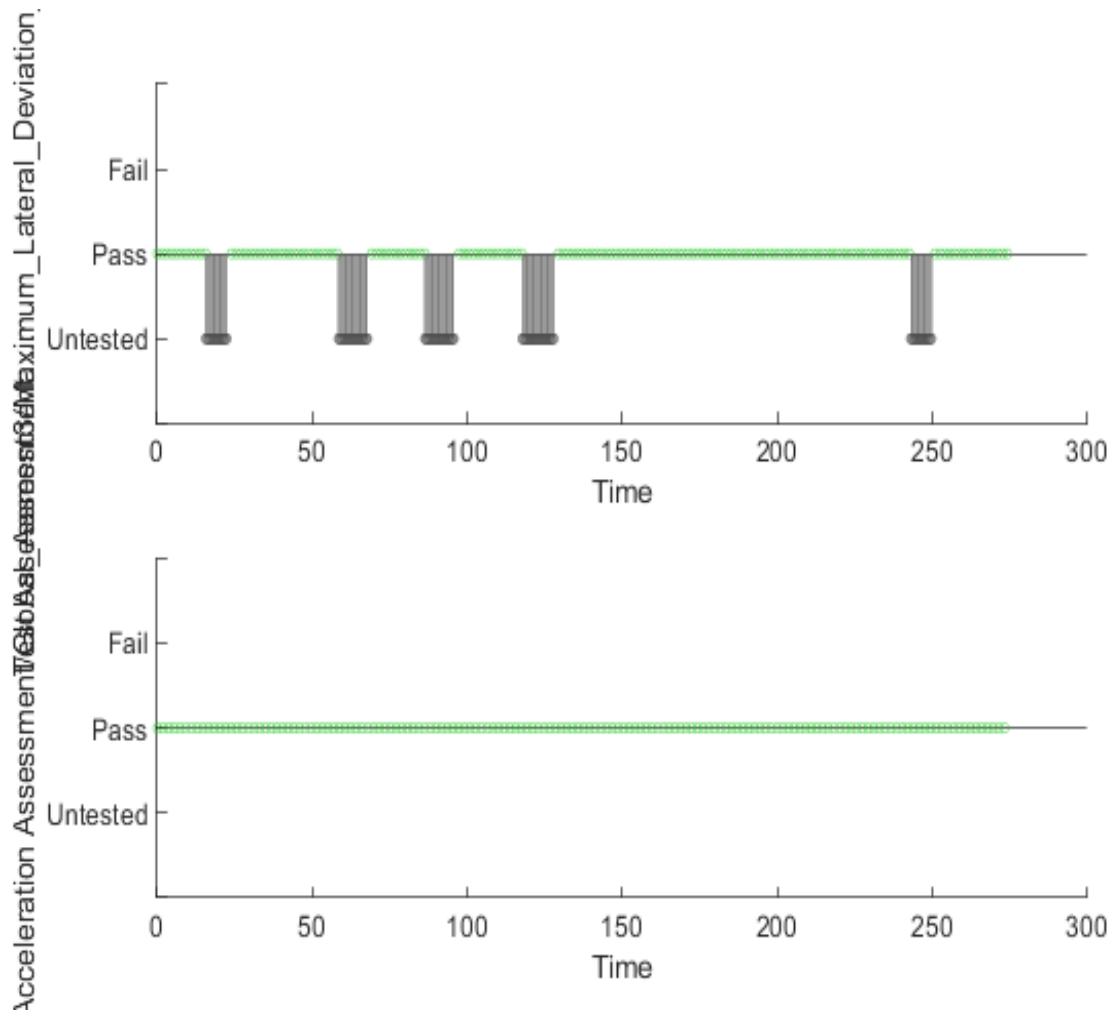
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Name	
✓	Test Assessment1/Safe_Overtake_Assessment:verify(duration(lateral_dev > 5 && lateral_dev < 3,sec)<1)
✓	Test Assessment2/Lateral_Deviation_Assessment:verify(duration(lateral_dev > 0.75,sec)<1)



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Name	
✓	Test Assessment3/Maximum_Lateral_Deviation_Assessment:verify(lateral_dev < 1)
✓	Lateral Acceleration Assessment/Global_Assessment:verify(duration(Lateral_acceleration>=2,sec)<=0.5)



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Simulation

System Under Test Information

Model:	Dynamic_obstacle_avoidance
Harness:	Avoidance_Real_Scenario
Harness Owner:	Dynamic_obstacle_avoidance/Subsystem
Release:	Current
Simulation Mode:	normal

Override SIL or PIL0

Mode:

Configuration Set:Configuration1

Start Time:0

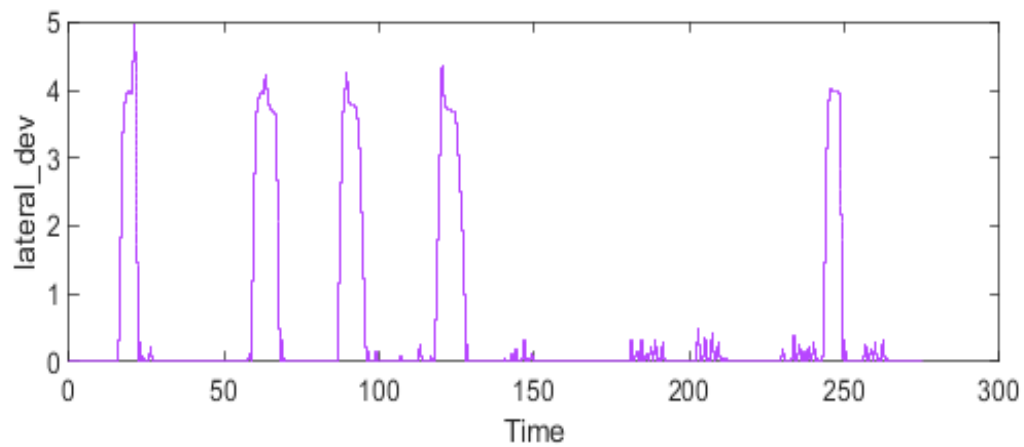
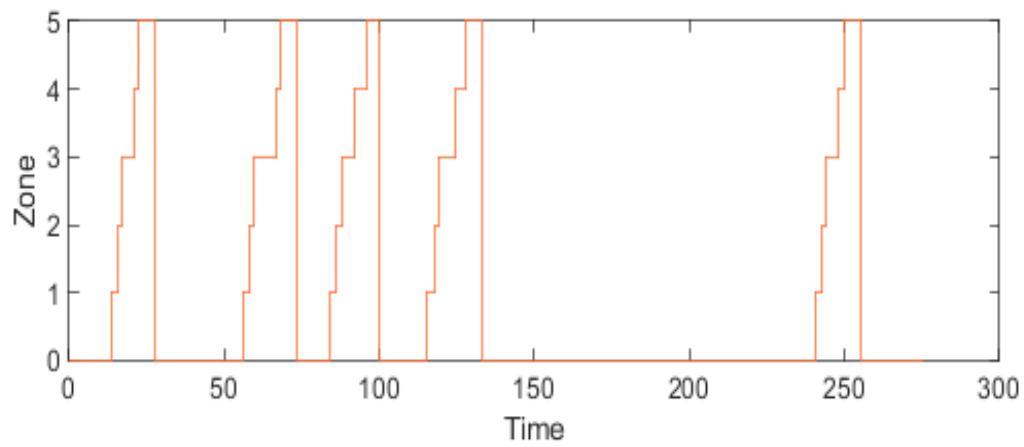
Stop Time:275.08204274327625

Checksum:3560003545 2638914006 1526288829 1442388740

Simulation Output

Name	Data Type	Units	Sample Time	Interp	Sync	Link to Plot
Zone	double		0.01	zoh	union	Link
lateral_dev	double		0.01	zoh	union	Link

Name	Data Type	Units	Sample Time	Interp	Sync
Zone	double		0.01	zoh	union
lateral_dev	double		0.01	zoh	union



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Puglia

Test Result Information

Result Type: Test Case Result
Parent: [Avoidance in real scenario \(Ford E150\)](#)
Start Time: 10-Jun-2021 18:30:04

End Time: 10-Jun-2021 18:33:01
Outcome: Passed

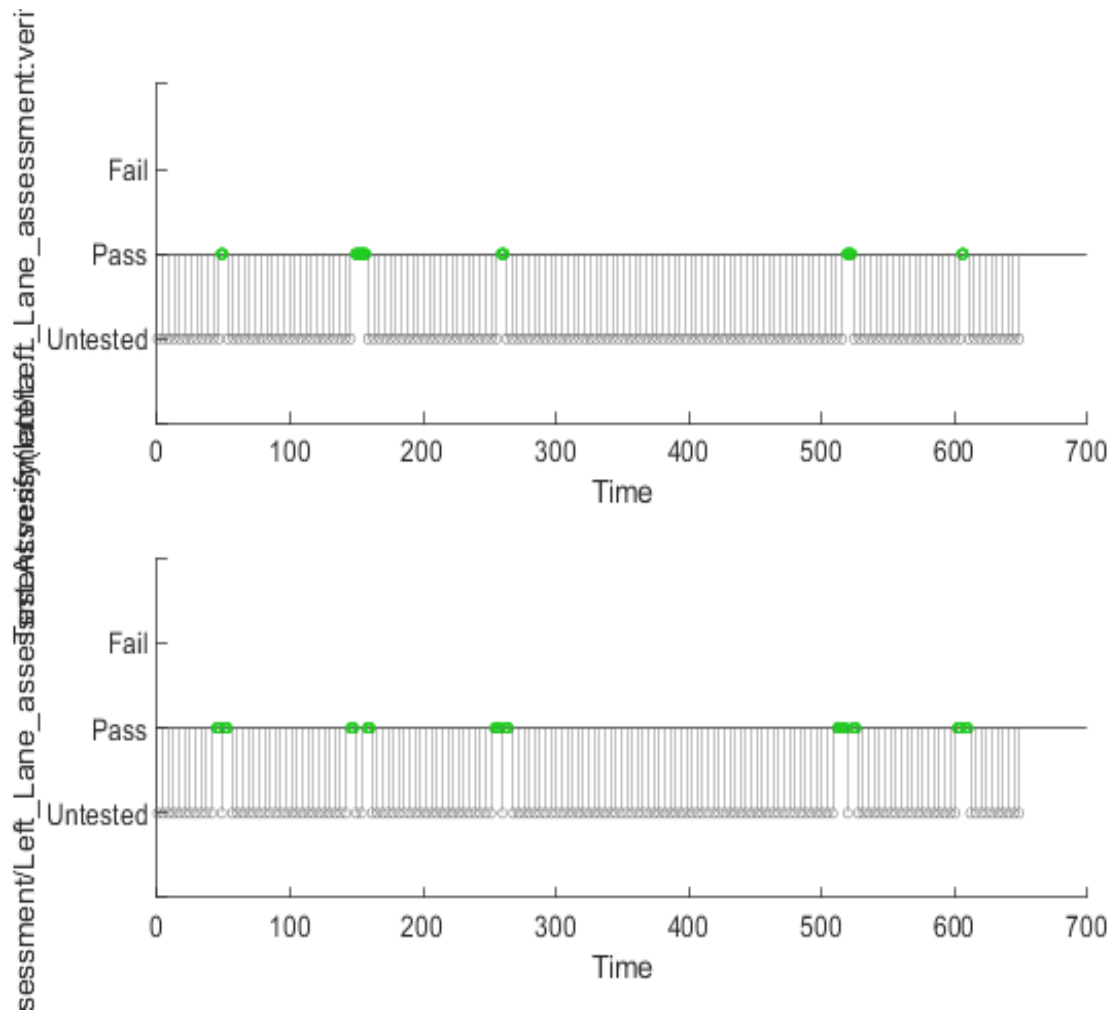
Test Case Information

Name: Puglia
Type: Simulation Test

Verify Result

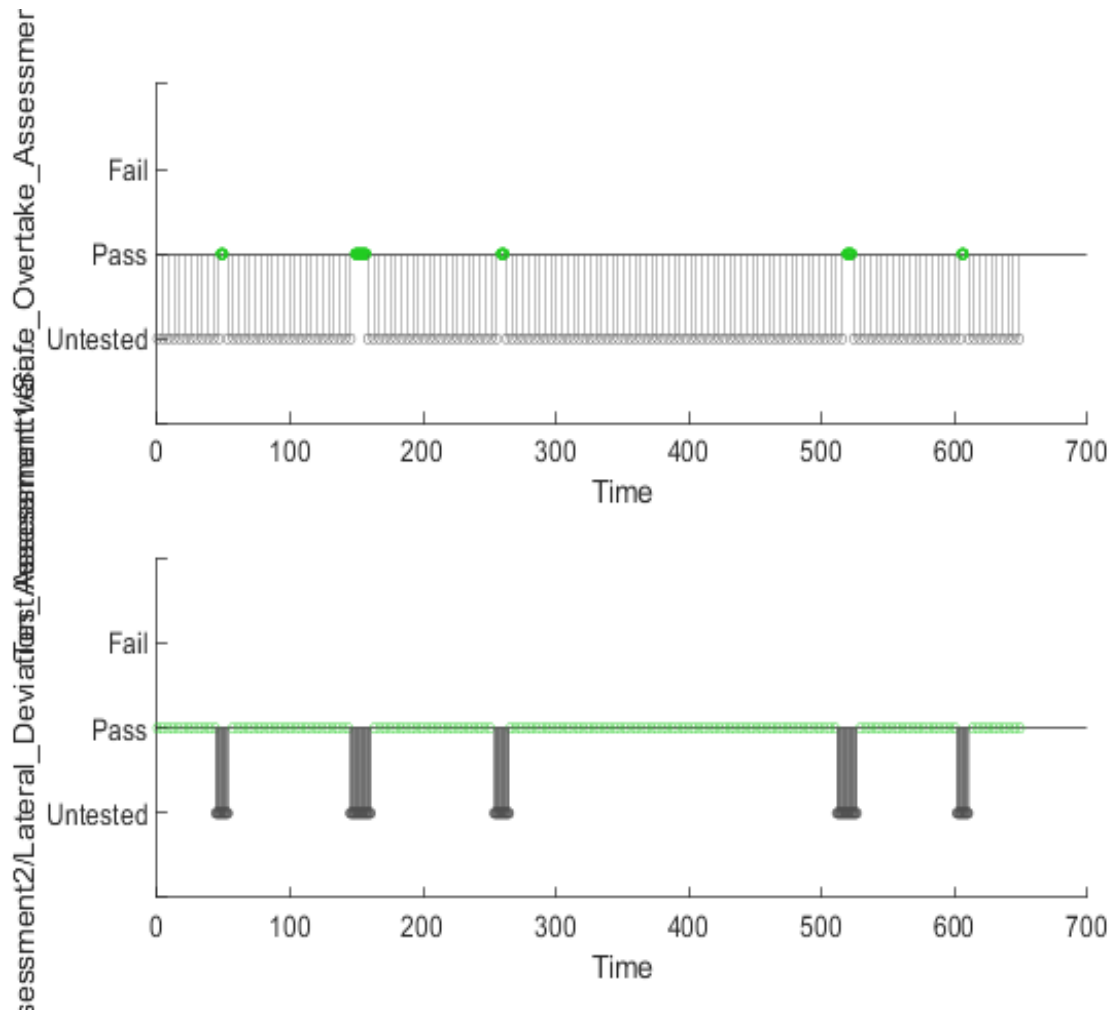
Name	Link to Plot
✓ Test Assessment/Left_Lane_assessment:verify(lateral_dev >= 2 && lateral_dev <= 6)	Link
✓ Test Assessment/Left_Lane_assessment:verify(lateral_dev < 6)	Link
✓ Test Assessment1/Safe_Overtake_Assessment:verify(duration(lateral_dev > 5 && lateral_dev < 3,sec)<1)	Link
✓ Test Assessment2/Lateral_Deviation_Assessment:verify(duration(lateral_dev > 0.75,sec)<1)	Link
✓ Test Assessment3/Maximum_Lateral_Deviation_Assessment:verify(lateral_dev < 1)	Link
✓ Lateral Acceleration Assessment/Global_Assessment:verify(duration(Lateral_acceleration>=2,sec)<=0.5)	Link

Name
✓ Test Assessment/Left_Lane_assessment:verify(lateral_dev >= 2 && lateral_dev <= 6)
✓ Test Assessment/Left_Lane_assessment:verify(lateral_dev < 6)



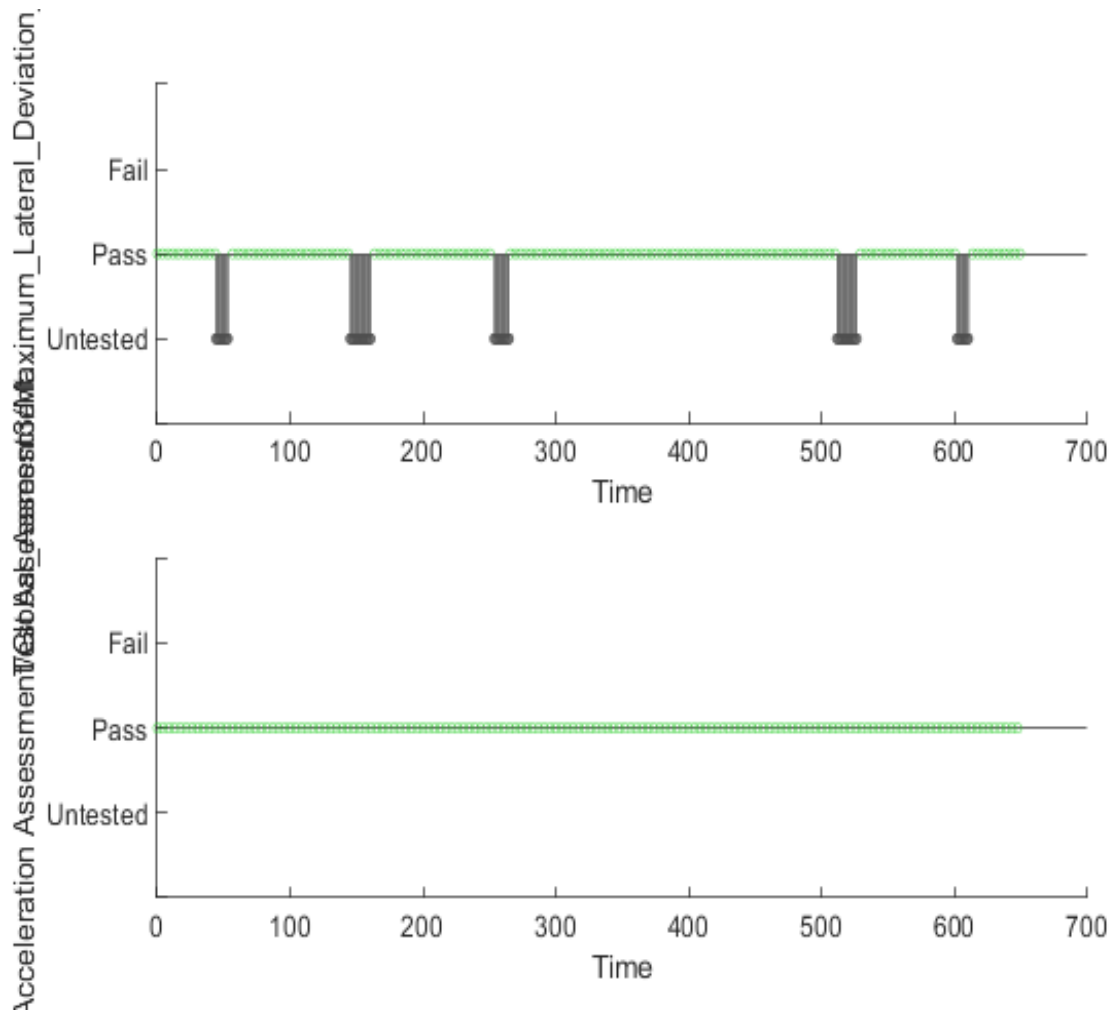
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Name	
✓	Test Assessment1/Safe_Overtake_Assessment:verify(duration(lateral_dev > 5 && lateral_dev < 3,sec)<1)
✓	Test Assessment2/Lateral_Deviation_Assessment:verify(duration(lateral_dev > 0.75,sec)<1)



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Name	
✓	Test Assessment3/Maximum_Lateral_Deviation_Assessment:verify(lateral_dev < 1)
✓	Lateral Acceleration Assessment/Global_Assessment:verify(duration(Lateral_acceleration>=2,sec)<=0.5)



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Simulation

System Under Test Information

Model:	Dynamic_obstacle_avoidance
Harness:	Avoidance_Real_Scenario
Harness Owner:	Dynamic_obstacle_avoidance/Subsystem
Release:	Current
Simulation Mode:	normal

Override SIL or PIL0

Mode:

Configuration Set:Configuration1

Start Time:0

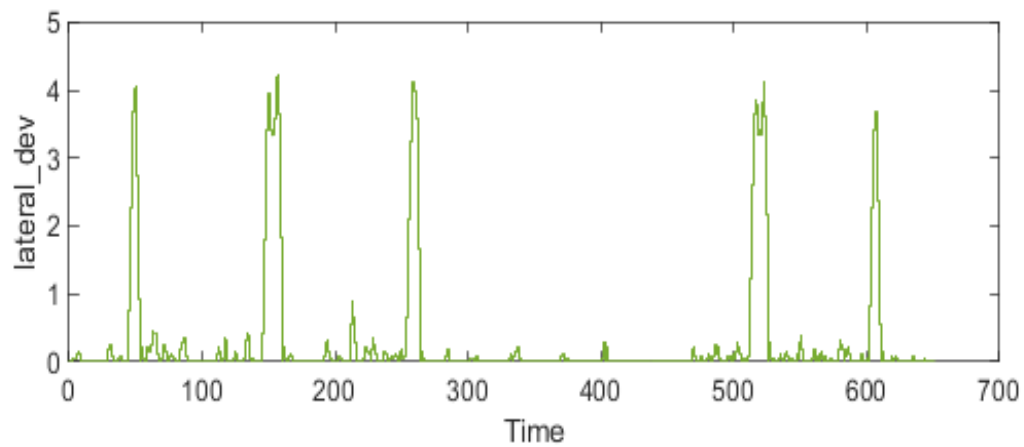
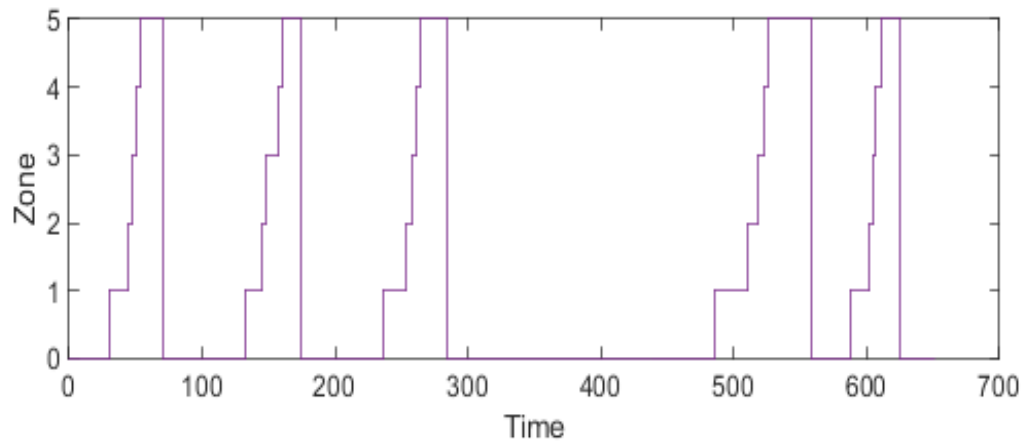
Stop Time:651.65546907329588

Checksum:3966393457 781830547 740493527 1266367321

Simulation Output

Name	Data Type	Units	Sample Time	Interp	Sync	Link to Plot
Zone	double		0.01	zoh	union	Link
lateral_dev	double		0.01	zoh	union	Link

Name	Data Type	Units	Sample Time	Interp	Sync
Zone	double		0.01	zoh	union
lateral_dev	double		0.01	zoh	union



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Indianapolis Motor Speedway

Test Result Information

Result Type: Test Case Result
Parent: [Avoidance in real scenario \(Ford E150\)](#)
Start Time: 10-Jun-2021 18:33:01

End Time: 10-Jun-2021 18:33:28
Outcome: Passed

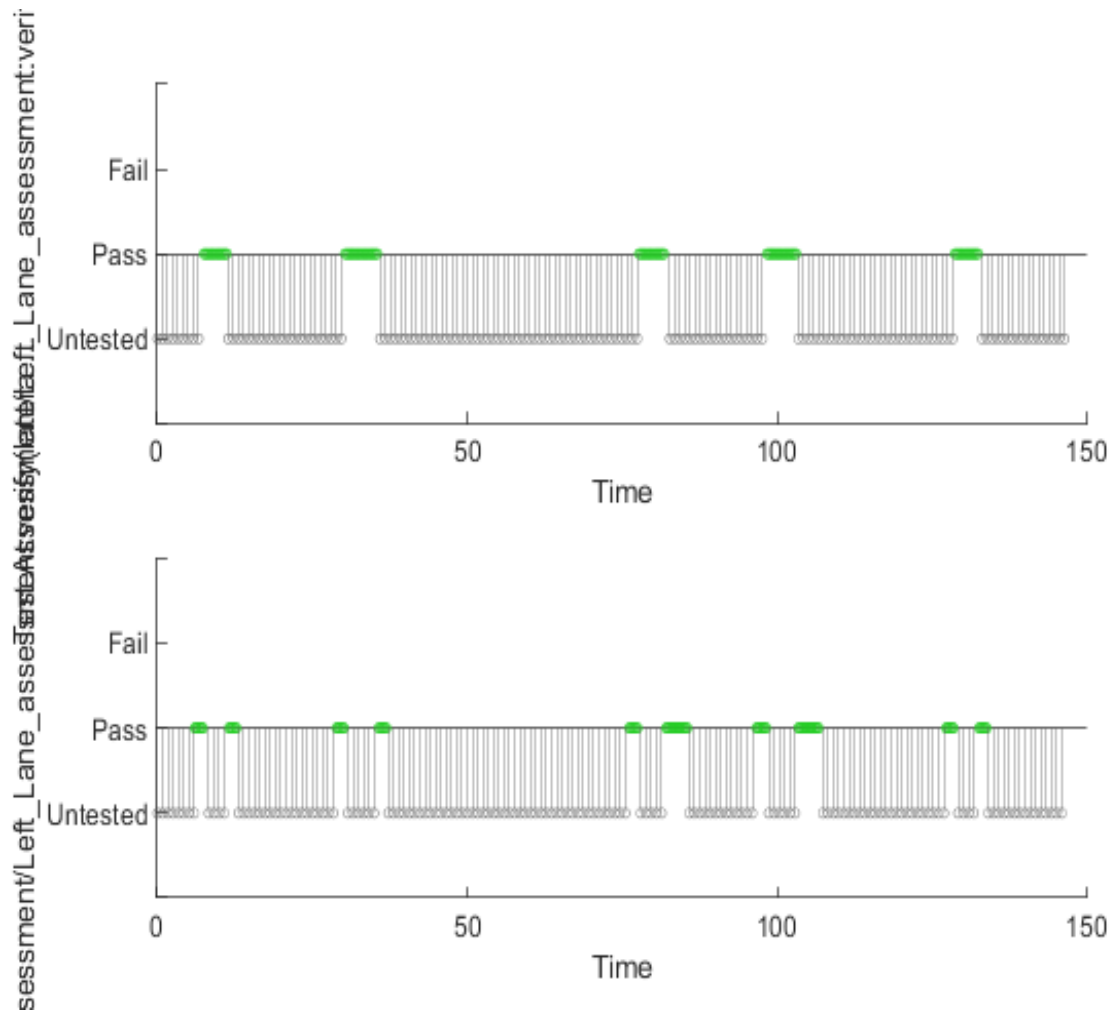
Test Case Information

Name: Indianapolis Motor Speedway
Type: Simulation Test

Verify Result

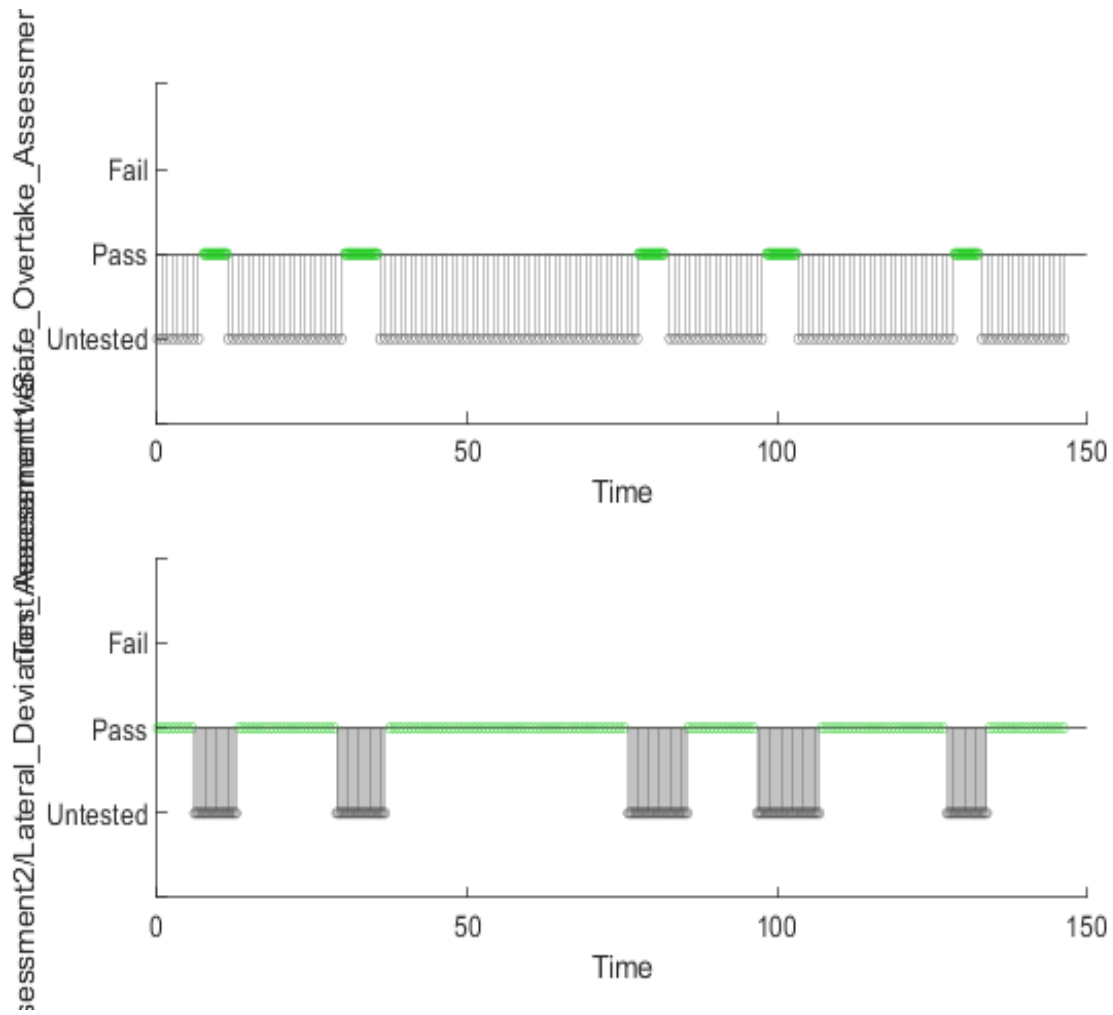
Name	Link to Plot
✓ Test Assessment/Left_Lane_assessment:verify(lateral_dev >= 2 && lateral_dev <= 6)	Link
✓ Test Assessment/Left_Lane_assessment:verify(lateral_dev < 6)	Link
✓ Test Assessment1/Safe_Overtake_Assessment:verify(duration(lateral_dev > 5 && lateral_dev < 3,sec)<1)	Link
✓ Test Assessment2/Lateral_Deviation_Assessment:verify(duration(lateral_dev > 0.75,sec)<1)	Link
✓ Test Assessment3/Maximum_Lateral_Deviation_Assessment:verify(lateral_dev < 1)	Link
✓ Lateral Acceleration Assessment/Global_Assessment:verify(duration(Lateral_acceleration>=2,sec)<=0.5)	Link

Name
✓ Test Assessment/Left_Lane_assessment:verify(lateral_dev >= 2 && lateral_dev <= 6)
✓ Test Assessment/Left_Lane_assessment:verify(lateral_dev < 6)



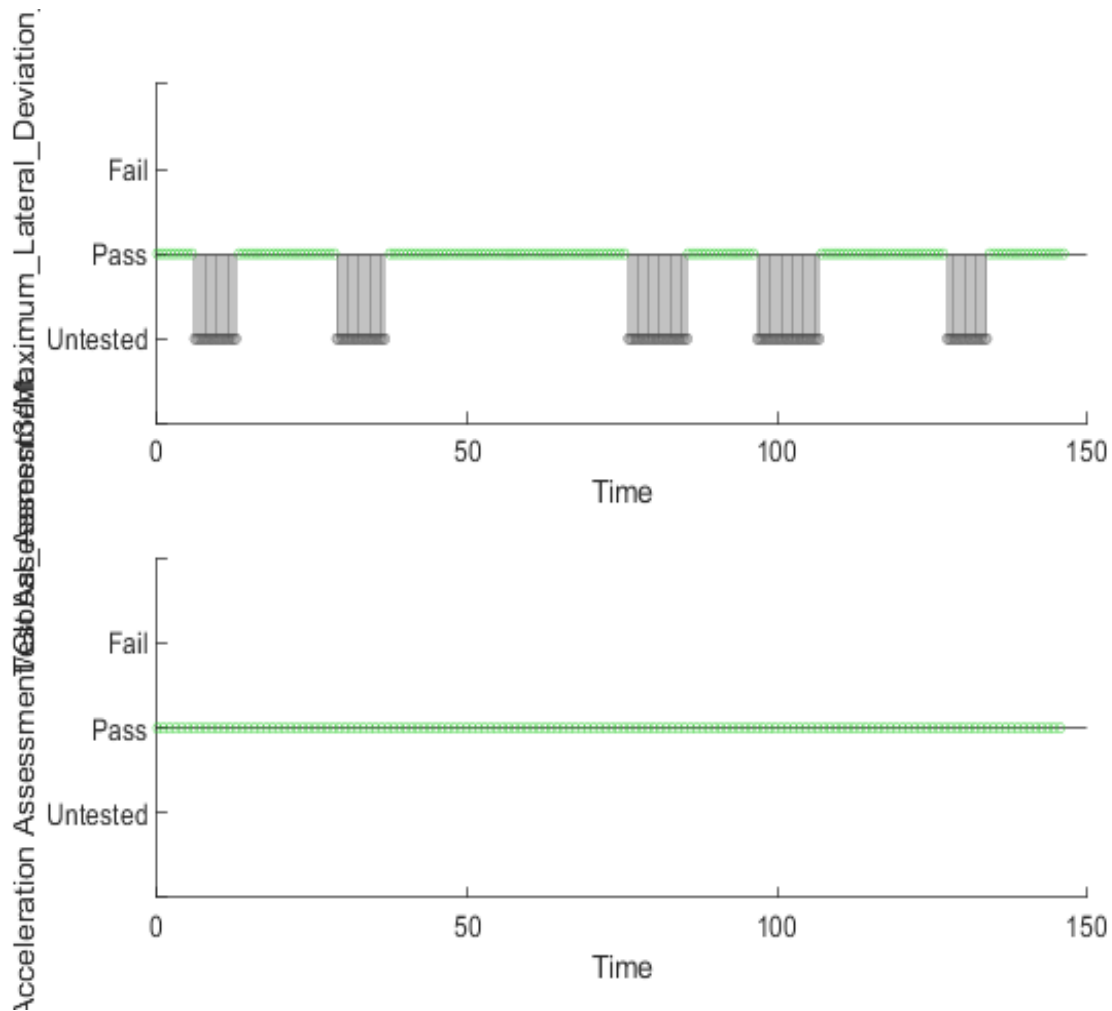
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Name	
✓	Test Assessment1/Safe_Overtake_Assessment:verify(duration(lateral_dev > 5 && lateral_dev < 3,sec)<1)
✓	Test Assessment2/Lateral_Deviation_Assessment:verify(duration(lateral_dev > 0.75,sec)<1)



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Name	
✓	Test Assessment3/Maximum_Lateral_Deviation_Assessment:verify(lateral_dev < 1)
✓	Lateral Acceleration Assessment/Global_Assessment:verify(duration(Lateral_acceleration>=2,sec)<=0.5)



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Simulation

System Under Test Information

Model:	Dynamic_obstacle_avoidance
Harness:	Avoidance_Real_Scenario
Harness Owner:	Dynamic_obstacle_avoidance/Subsystem
Release:	Current
Simulation Mode:	normal

Override SIL or PIL0

Mode:

Configuration Set:Configuration1

Start Time:0

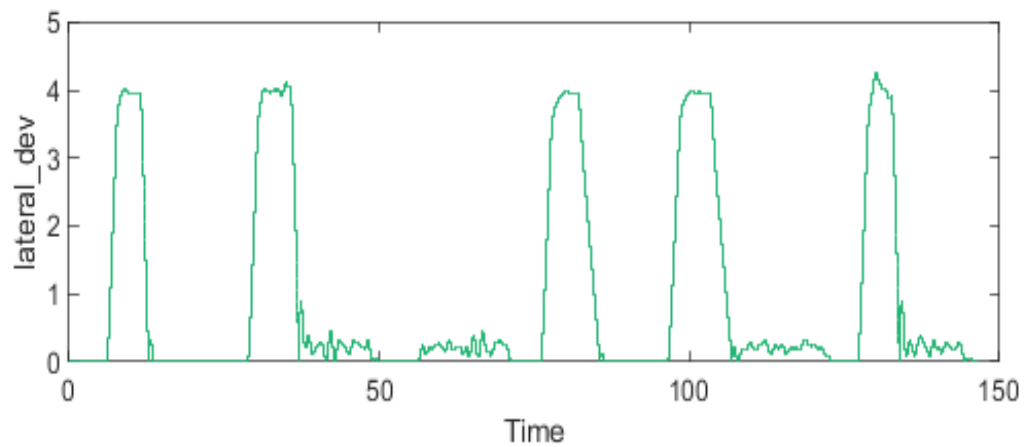
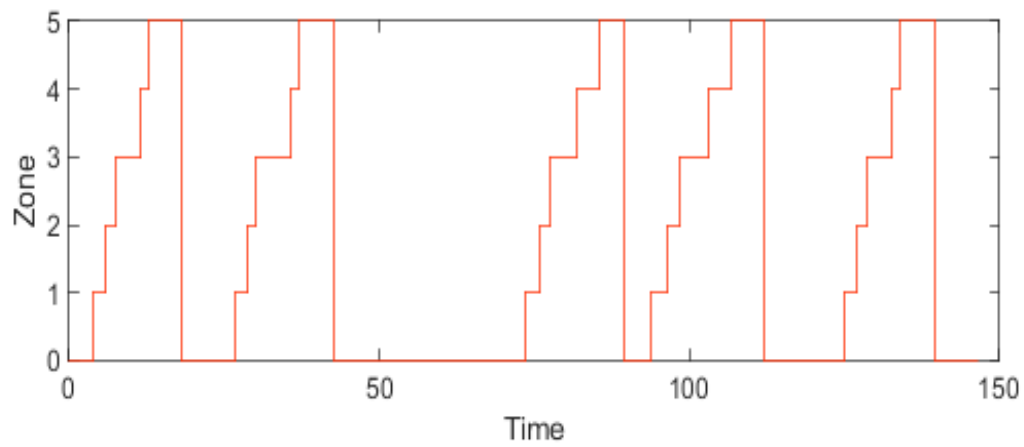
Stop Time:146.51791178475014

Checksum:206311103 3317914342 182976386 2468747102

Simulation Output

Name	Data Type	Units	Sample Time	Interp	Sync	Link to Plot
Zone	double		0.01	zoh	union	Link
lateral_dev	double		0.01	zoh	union	Link

Name	Data Type	Units	Sample Time	Interp	Sync
Zone	double		0.01	zoh	union
lateral_dev	double		0.01	zoh	union



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Avoidance in real scenario (Suzuki Samurai)

Test Result Information

Result Type: Test Suite Result
Parent: [Avoidance real scenario](#)

Start Time: 10-Jun-2021 18:33:28
End Time: 10-Jun-2021 18:37:22
Outcome: Total: 3, **Passed: 3**

Test Suite Information

Name: Avoidance in real scenario (Suzuki Samurai)

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A14 Highway

Test Result Information

Result Type: Test Case Result
Parent: [Avoidance in real scenario \(Suzuki Samurai\)](#)
Start Time: 10-Jun-2021 18:33:28
End Time: 10-Jun-2021 18:34:21
Outcome: **Passed**

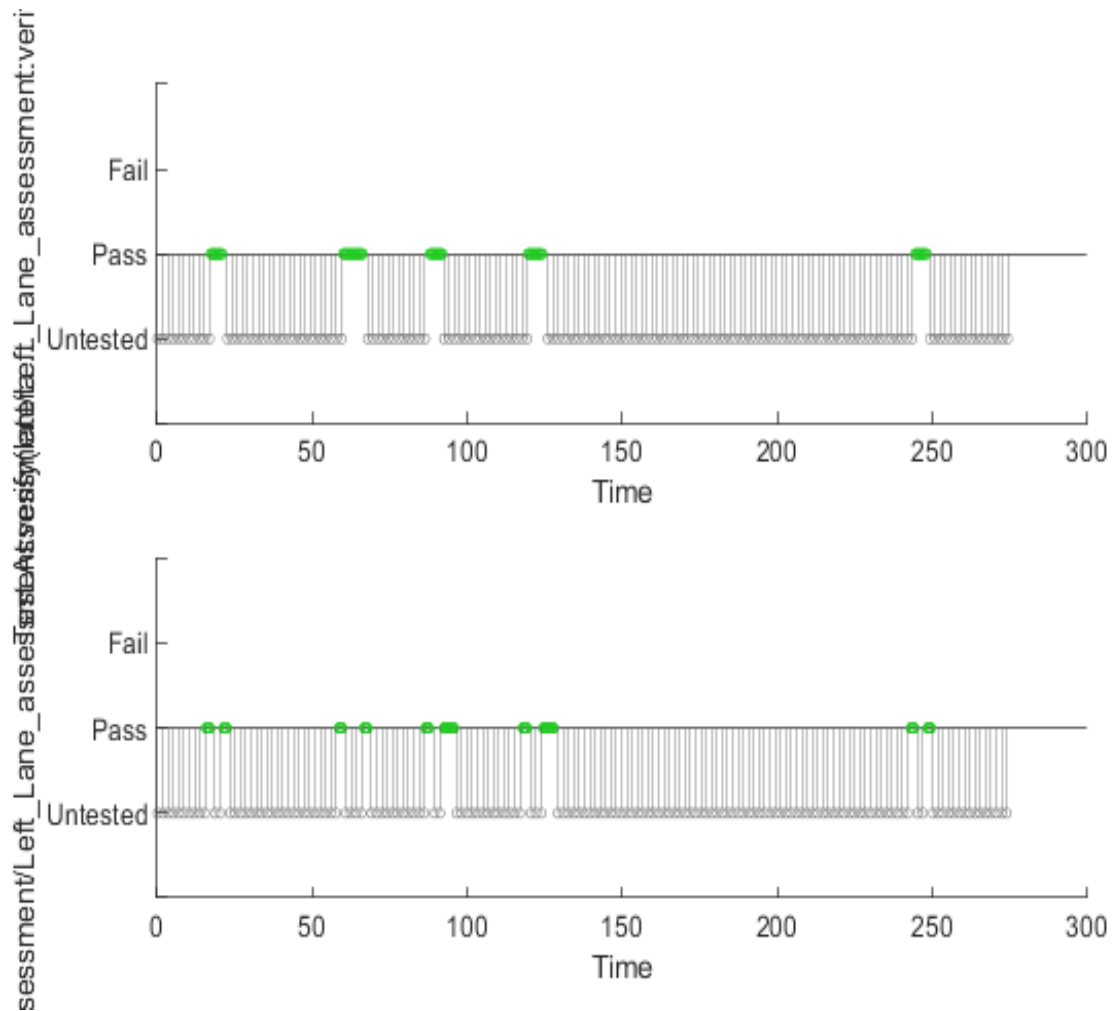
Test Case Information

Name: A14 Highway
Type: Simulation Test

Verify Result

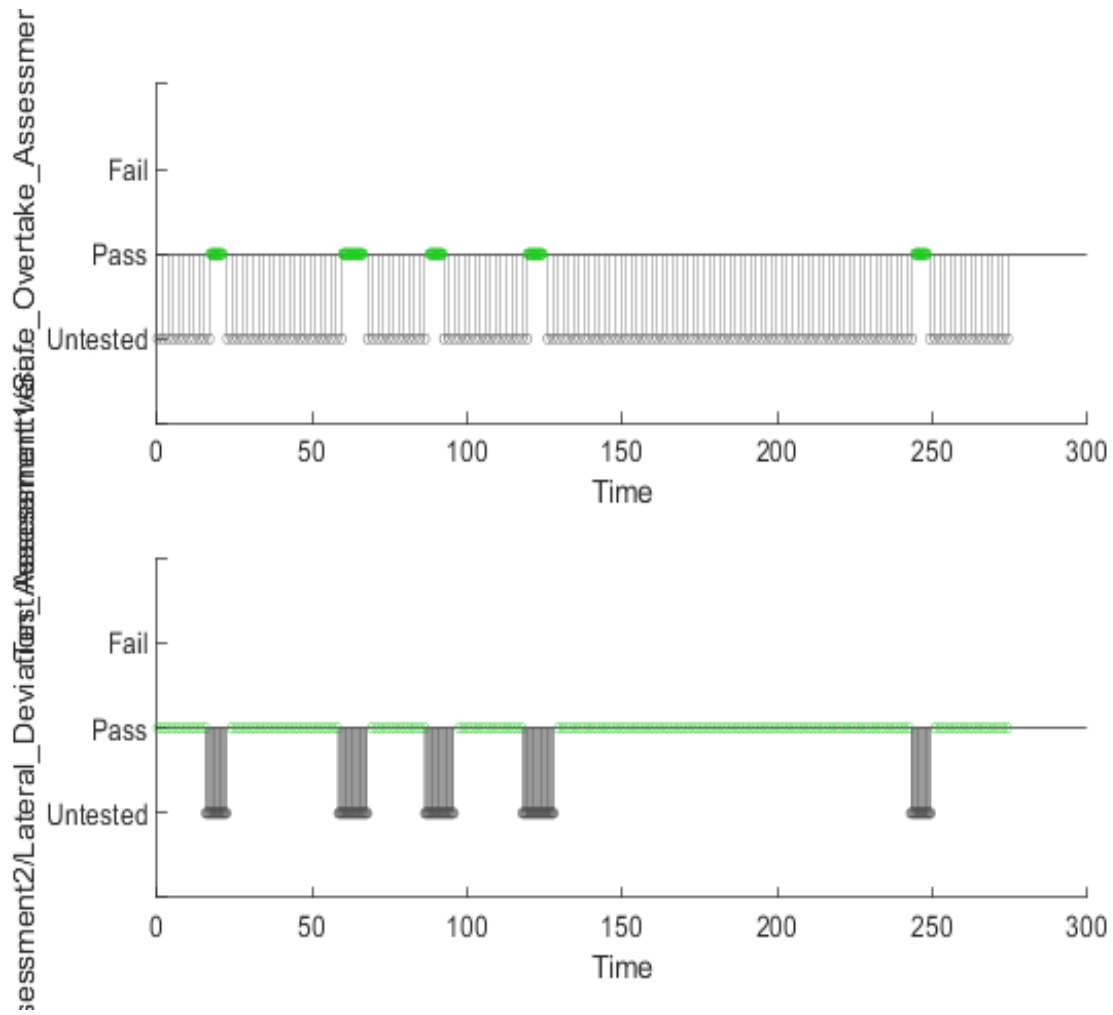
Name	Link to Plot
✓ Test Assessment/Left_Lane_assessment:verify(lateral_dev >= 2 && lateral_dev <= 6)	Link
✓ Test Assessment/Left_Lane_assessment:verify(lateral_dev < 6)	Link
✓ Test Assessment1/Safe_Overtake_Assessment:verify(duration(lateral_dev > 5 && lateral_dev < 3,sec)<1)	Link
✓ Test Assessment2/Lateral_Deviation_Assessment:verify(duration(lateral_dev > 0.75,sec)<1)	Link
✓ Test Assessment3/Maximum_Lateral_Deviation_Assessment:verify(lateral_dev < 1)	Link
✓ Lateral Acceleration Assessment/Global_Assessment:verify(duration(Lateral_acceleration>=2,sec)<=0.5)	Link

Name
✓ Test Assessment/Left_Lane_assessment:verify(lateral_dev >= 2 && lateral_dev <= 6)
✓ Test Assessment/Left_Lane_assessment:verify(lateral_dev < 6)



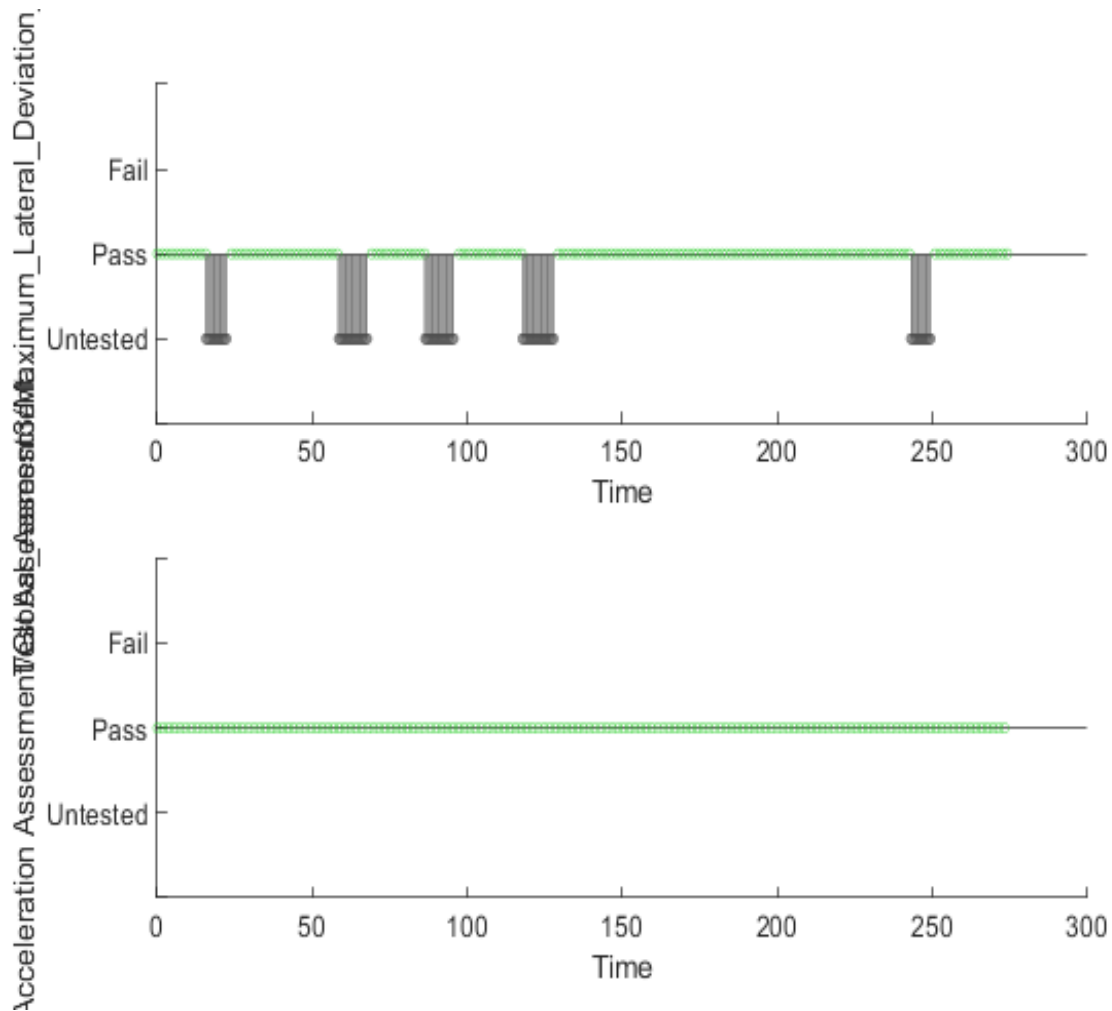
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Name	
✓	Test Assessment1/Safe_Overtake_Assessment:verify(duration(lateral_dev > 5 && lateral_dev < 3,sec)<1)
✓	Test Assessment2/Lateral_Deviation_Assessment:verify(duration(lateral_dev > 0.75,sec)<1)



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Name	
✓	Test Assessment3/Maximum_Lateral_Deviation_Assessment:verify(lateral_dev < 1)
✓	Lateral Acceleration Assessment/Global_Assessment:verify(duration(Lateral_acceleration>=2,sec)<=0.5)



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Simulation

System Under Test Information

Model:	Dynamic_obstacle_avoidance
Harness:	Avoidance_Real_Scenario
Harness Owner:	Dynamic_obstacle_avoidance/Subsystem
Release:	Current
Simulation Mode:	normal

Override SIL or PIL0

Mode:

Configuration Set:Configuration1

Start Time:0

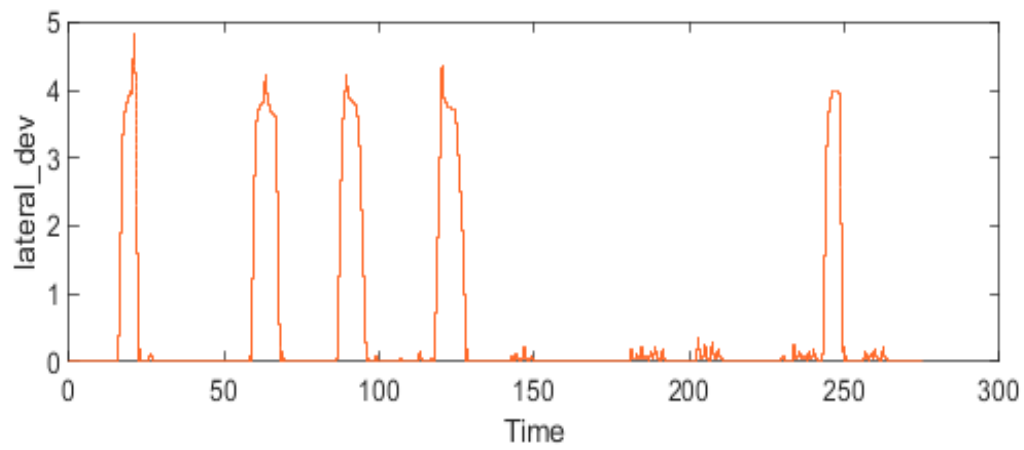
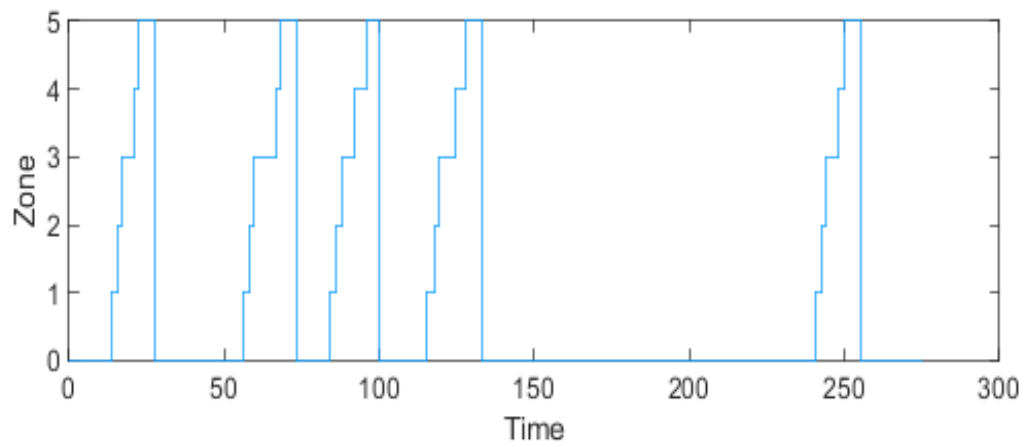
Stop Time:275.08204274327625

Checksum:3560003545 2638914006 1526288829 1442388740

Simulation Output

Name	Data Type	Units	Sample Time	Interp	Sync	Link to Plot
Zone	double		0.01	zoh	union	Link
lateral_dev	double		0.01	zoh	union	Link

Name	Data Type	Units	Sample Time	Interp	Sync
Zone	double		0.01	zoh	union
lateral_dev	double		0.01	zoh	union



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Puglia

Test Result Information

Result Type: Test Case Result
 Parent: [Avoidance in real scenario \(Suzuki Samurai\)](#)
 Start Time: 10-Jun-2021 18:34:21

End Time: 10-Jun-2021 18:36:58
Outcome: Passed

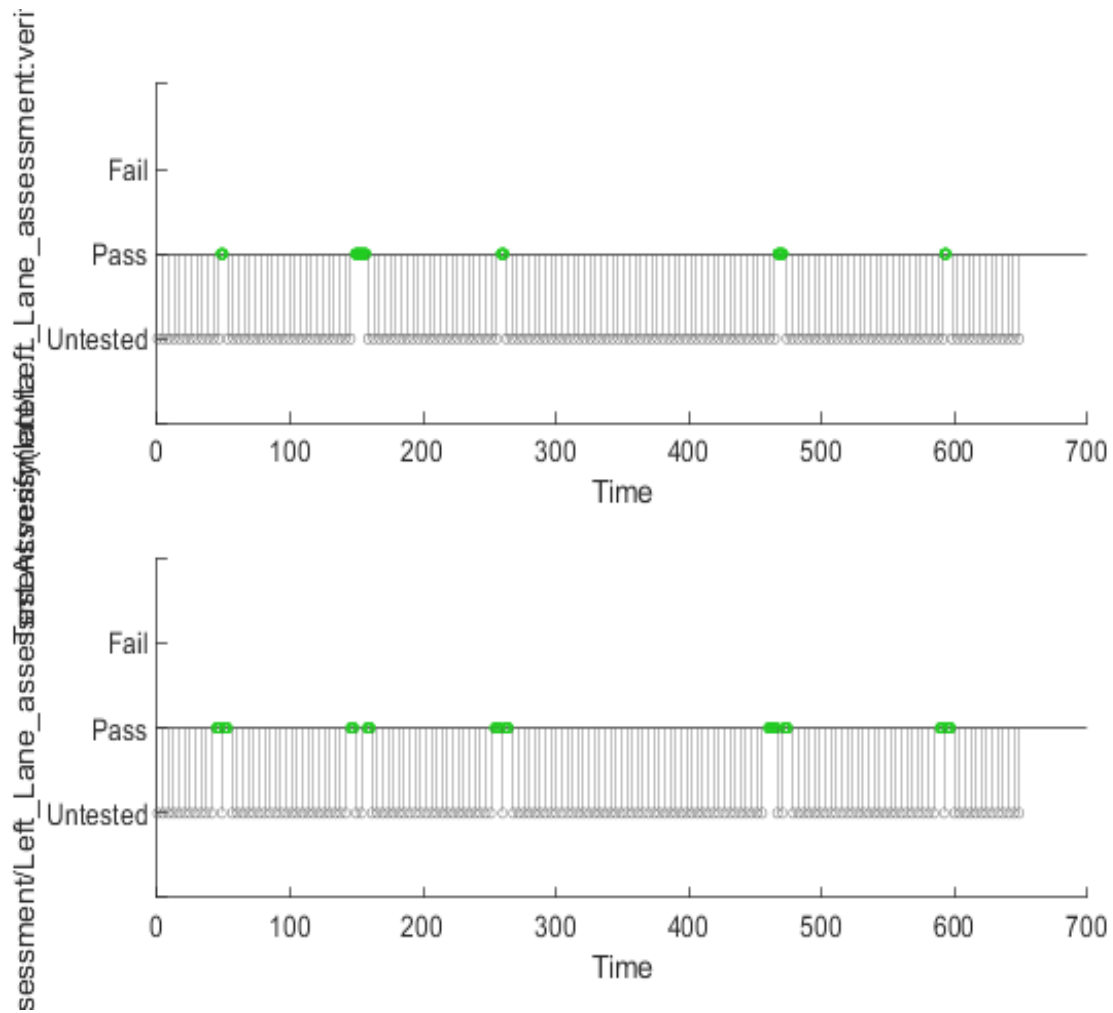
Test Case Information

Name: Puglia
Type: Simulation Test

Verify Result

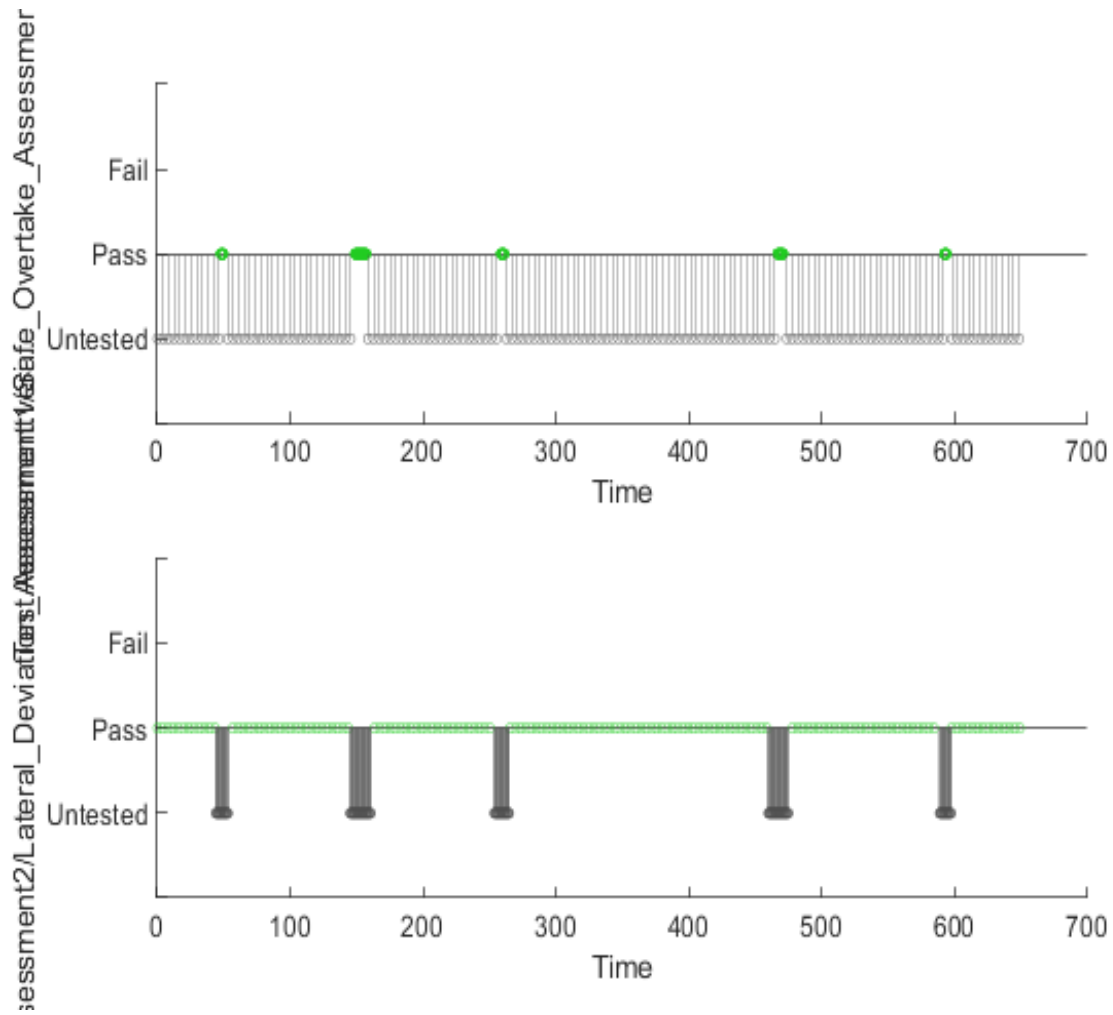
Name	Link to Plot
✓ Test Assessment/Left_Lane_assessment:verify(lateral_dev >= 2 && lateral_dev <= 6)	Link
✓ Test Assessment/Left_Lane_assessment:verify(lateral_dev < 6)	Link
✓ Test Assessment1/Safe_Overtake_Assessment:verify(duration(lateral_dev > 5 && lateral_dev < 3,sec)<1)	Link
✓ Test Assessment2/Lateral_Deviation_Assessment:verify(duration(lateral_dev > 0.75,sec)<1)	Link
✓ Test Assessment3/Maximum_Lateral_Deviation_Assessment:verify(lateral_dev < 1)	Link
✓ Lateral Acceleration Assessment/Global_Assessment:verify(duration(Lateral_acceleration>=2,sec)<=0.5)	Link

Name
✓ Test Assessment/Left_Lane_assessment:verify(lateral_dev >= 2 && lateral_dev <= 6)
✓ Test Assessment/Left_Lane_assessment:verify(lateral_dev < 6)



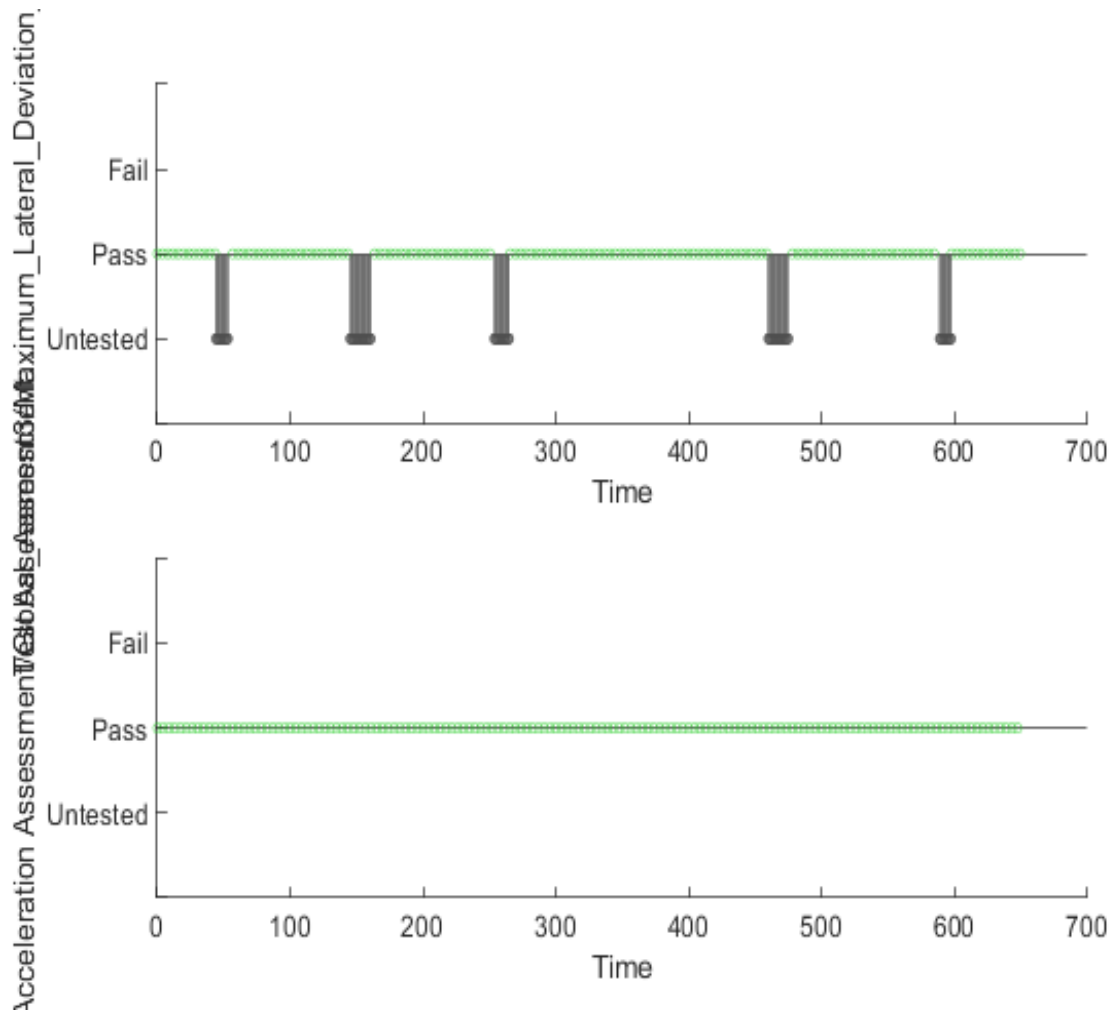
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Name	
✓	Test Assessment1/Safe_Overtake_Assessment:verify(duration(lateral_dev > 5 && lateral_dev < 3,sec)<1)
✓	Test Assessment2/Lateral_Deviation_Assessment:verify(duration(lateral_dev > 0.75,sec)<1)



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Name	
✓	Test Assessment3/Maximum_Lateral_Deviation_Assessment:verify(lateral_dev < 1)
✓	Lateral Acceleration Assessment/Global_Assessment:verify(duration(Lateral_acceleration>=2,sec)<=0.5)



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Simulation

System Under Test Information

Model:	Dynamic_obstacle_avoidance
Harness:	Avoidance_Real_Scenario
Harness Owner:	Dynamic_obstacle_avoidance/Subsystem
Release:	Current
Simulation Mode:	normal

Override SIL or PIL0

Mode:

Configuration Set:Configuration1

Start Time:0

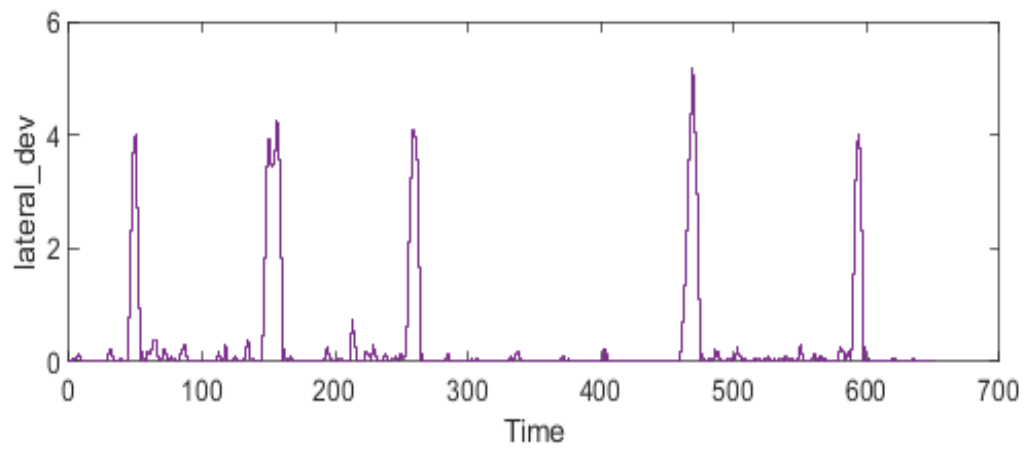
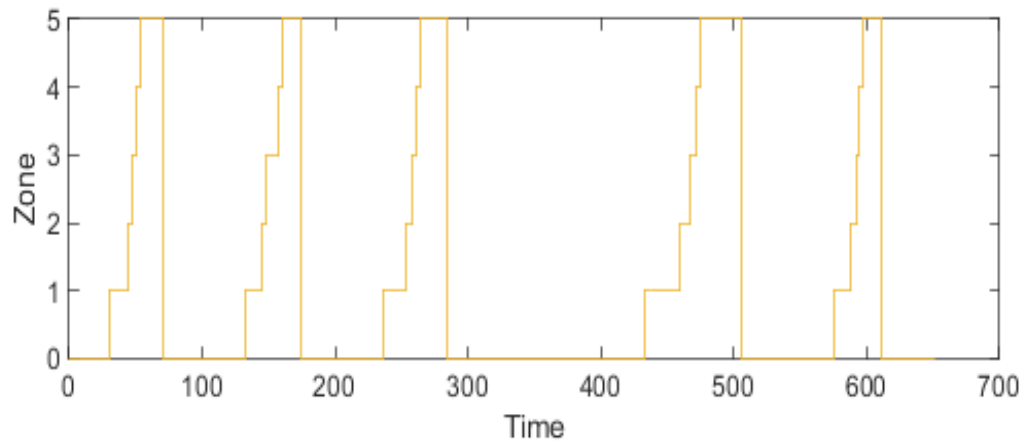
Stop Time:651.65546907329588

Checksum:3966393457 781830547 740493527 1266367321

Simulation Output

Name	Data Type	Units	Sample Time	Interp	Sync	Link to Plot
Zone	double		0.01	zoh	union	Link
lateral_dev	double		0.01	zoh	union	Link

Name	Data Type	Units	Sample Time	Interp	Sync
Zone	double		0.01	zoh	union
lateral_dev	double		0.01	zoh	union



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Indianapolis Motor Speedway

Test Result Information

Result Type: Test Case Result
Parent: [Avoidance in real scenario \(Suzuki Samurai\)](#)
Start Time: 10-Jun-2021 18:36:58

End Time: 10-Jun-2021 18:37:22
Outcome: Passed

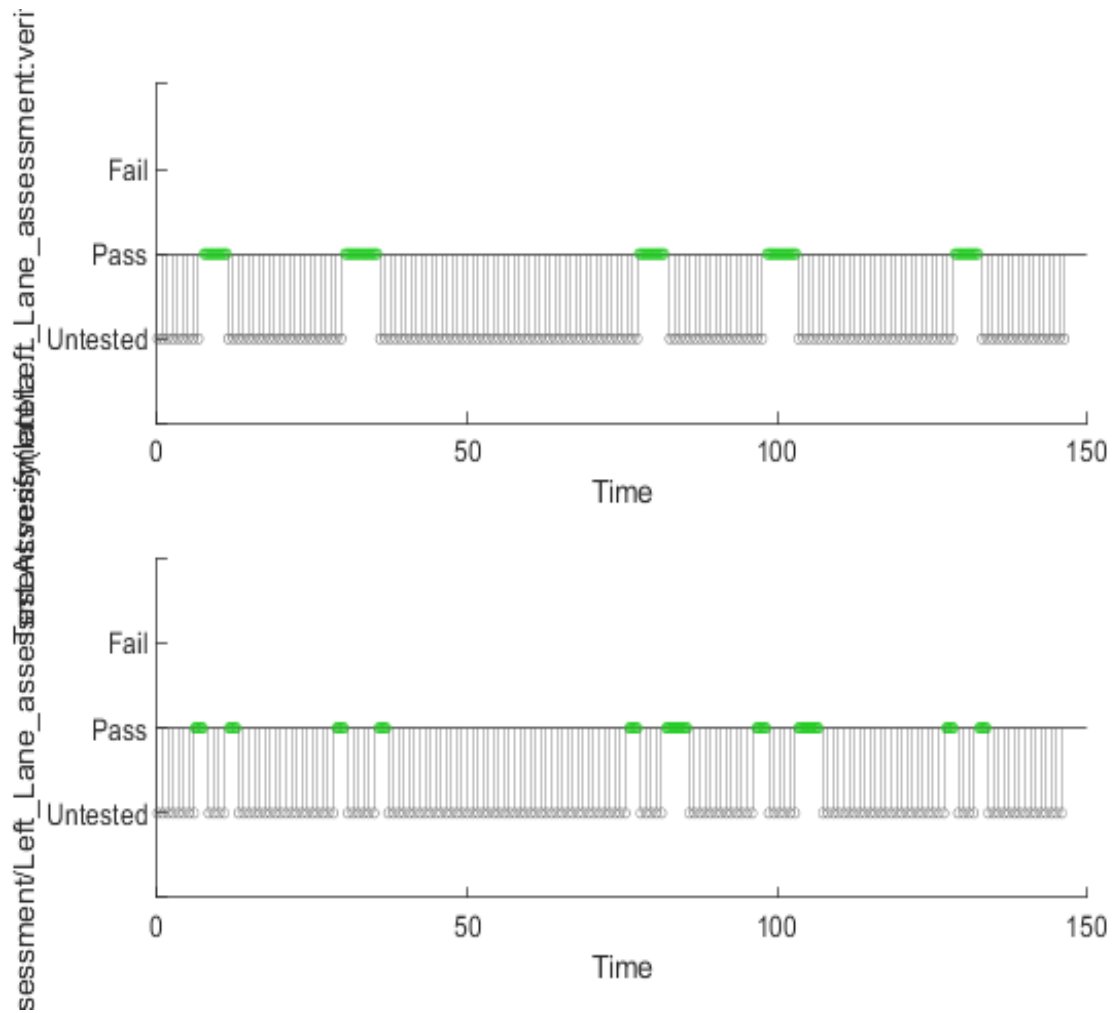
Test Case Information

Name: Indianapolis Motor Speedway
Type: Simulation Test

Verify Result

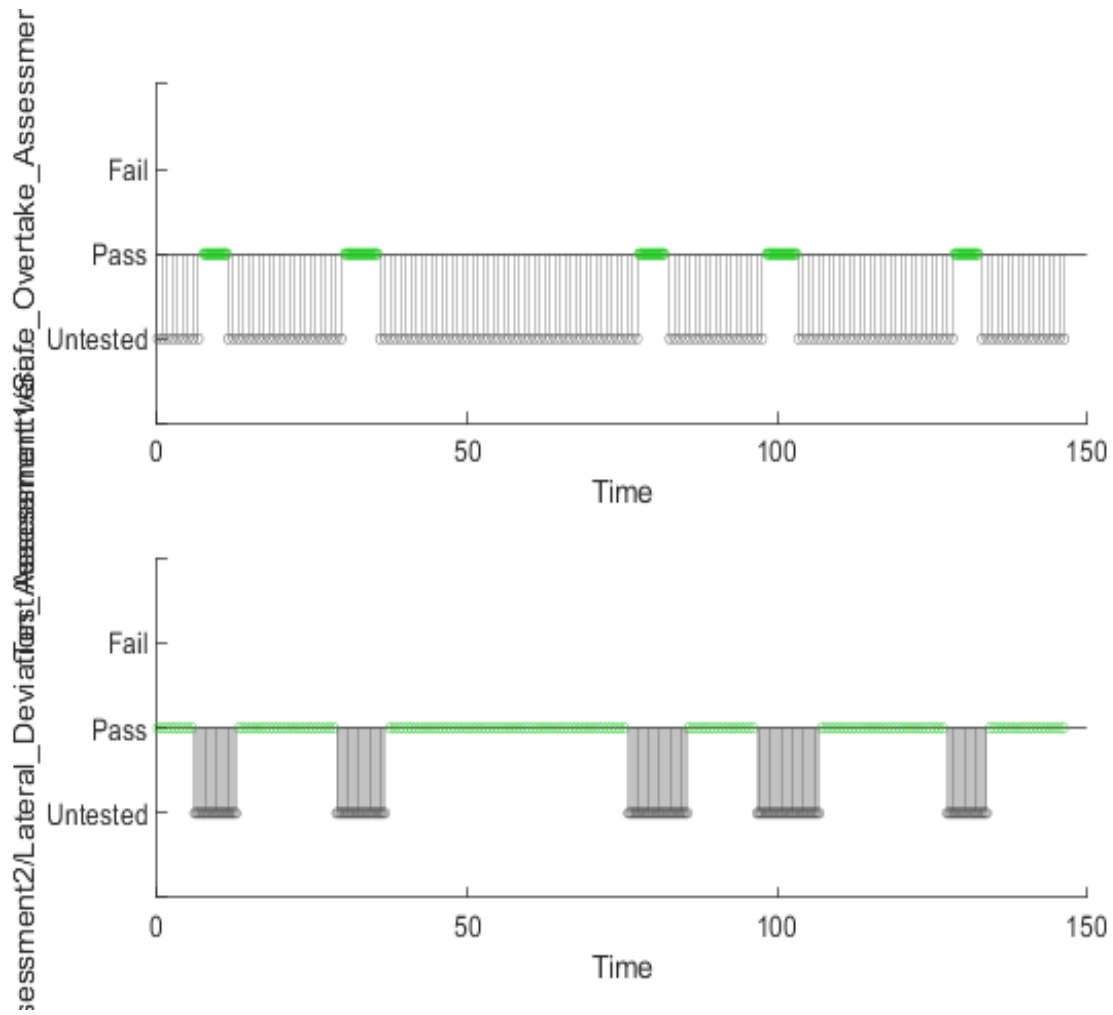
Name	Link to Plot
✓ Test Assessment/Left_Lane_assessment:verify(lateral_dev >= 2 && lateral_dev <= 6)	Link
✓ Test Assessment/Left_Lane_assessment:verify(lateral_dev < 6)	Link
✓ Test Assessment1/Safe_Overtake_Assessment:verify(duration(lateral_dev > 5 && lateral_dev < 3,sec)<1)	Link
✓ Test Assessment2/Lateral_Deviation_Assessment:verify(duration(lateral_dev > 0.75,sec)<1)	Link
✓ Test Assessment3/Maximum_Lateral_Deviation_Assessment:verify(lateral_dev < 1)	Link
✓ Lateral Acceleration Assessment/Global_Assessment:verify(duration(Lateral_acceleration>=2,sec)<=0.5)	Link

Name
✓ Test Assessment/Left_Lane_assessment:verify(lateral_dev >= 2 && lateral_dev <= 6)
✓ Test Assessment/Left_Lane_assessment:verify(lateral_dev < 6)



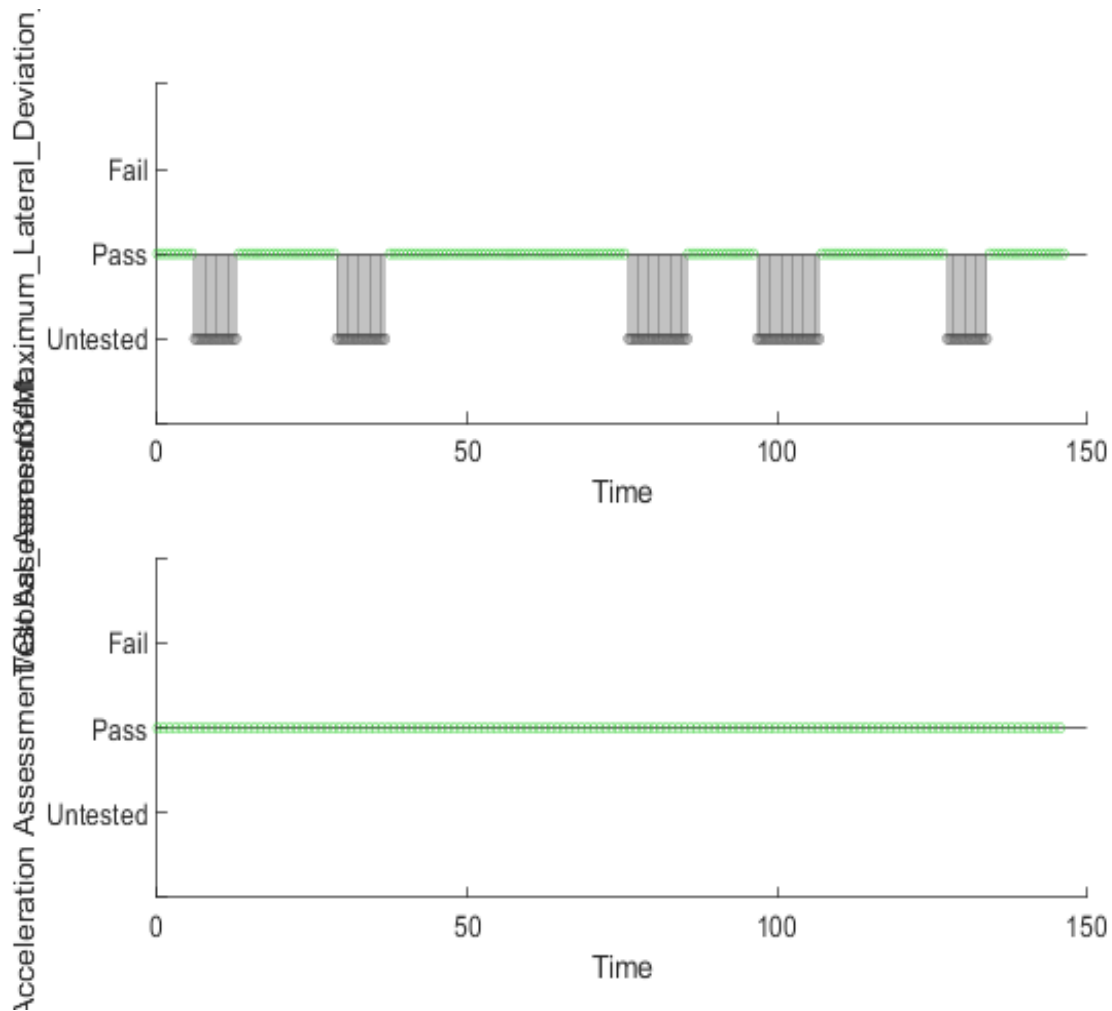
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Name	
✓	Test Assessment1/Safe_Overtake_Assessment:verify(duration(lateral_dev > 5 && lateral_dev < 3,sec)<1)
✓	Test Assessment2/Lateral_Deviation_Assessment:verify(duration(lateral_dev > 0.75,sec)<1)



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Name	
✓	Test Assessment3/Maximum_Lateral_Deviation_Assessment:verify(lateral_dev < 1)
✓	Lateral Acceleration Assessment/Global_Assessment:verify(duration(Lateral_acceleration>=2,sec)<=0.5)



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Simulation

System Under Test Information

Model:	Dynamic_obstacle_avoidance
Harness:	Avoidance_Real_Scenario
Harness Owner:	Dynamic_obstacle_avoidance/Subsystem
Release:	Current
Simulation Mode:	normal

Override SIL or PIL0

Mode:

Configuration Set:Configuration1

Start Time:0

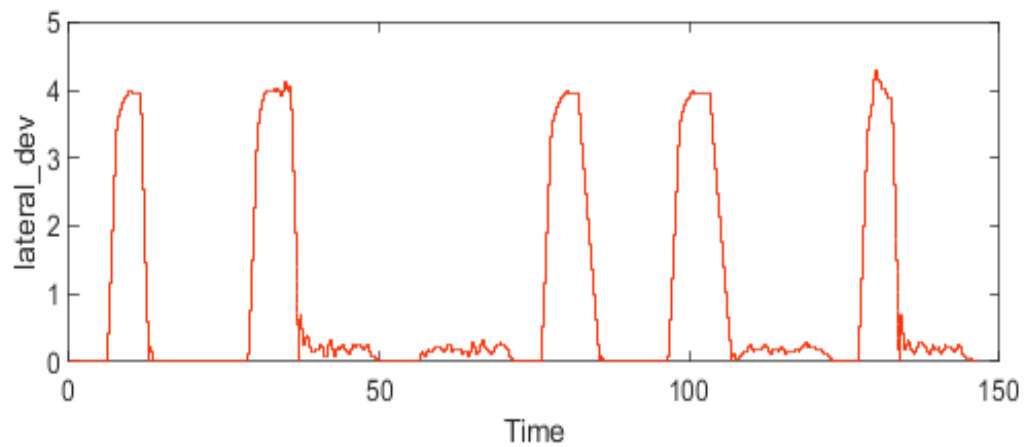
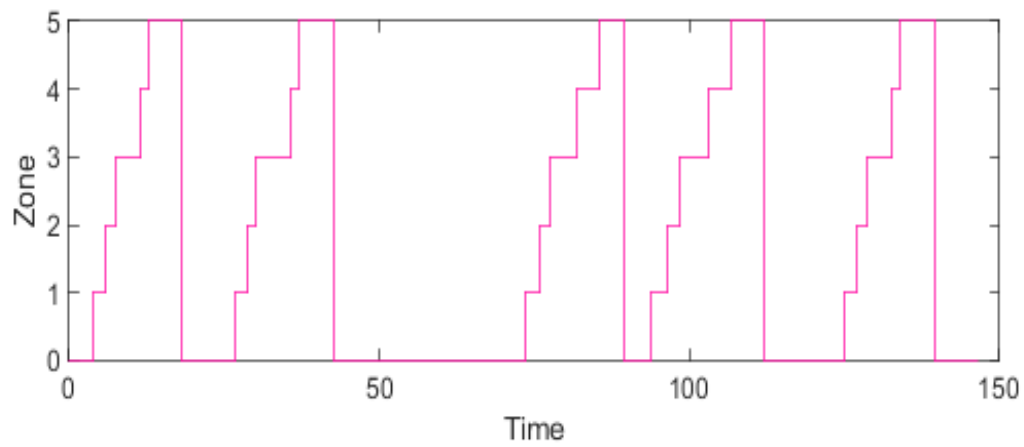
Stop Time:146.51791178475014

Checksum:206311103 3317914342 182976386 2468747102

Simulation Output

Name	Data Type	Units	Sample Time	Interp	Sync	Link to Plot
Zone	double		0.01	zoh	union	Link
lateral_dev	double		0.01	zoh	union	Link

Name	Data Type	Units	Sample Time	Interp	Sync
Zone	double		0.01	zoh	union
lateral_dev	double		0.01	zoh	union



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Avoidance in real scenario (Volkswagen Beetle)

Test Result Information

Result Type: Test Suite Result
Parent: [Avoidance real scenario](#)

Start Time: 10-Jun-2021 18:37:22
End Time: 10-Jun-2021 18:41:42
Outcome: Total: 3, **Passed: 3**

Test Suite Information

Name: Avoidance in real scenario (Volkswagen Beetle)

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A14 Highway

Test Result Information

Result Type: Test Case Result
Parent: [Avoidance in real scenario \(Volkswagen Beetle\)](#)
Start Time: 10-Jun-2021 18:37:22
End Time: 10-Jun-2021 18:38:17
Outcome: **Passed**

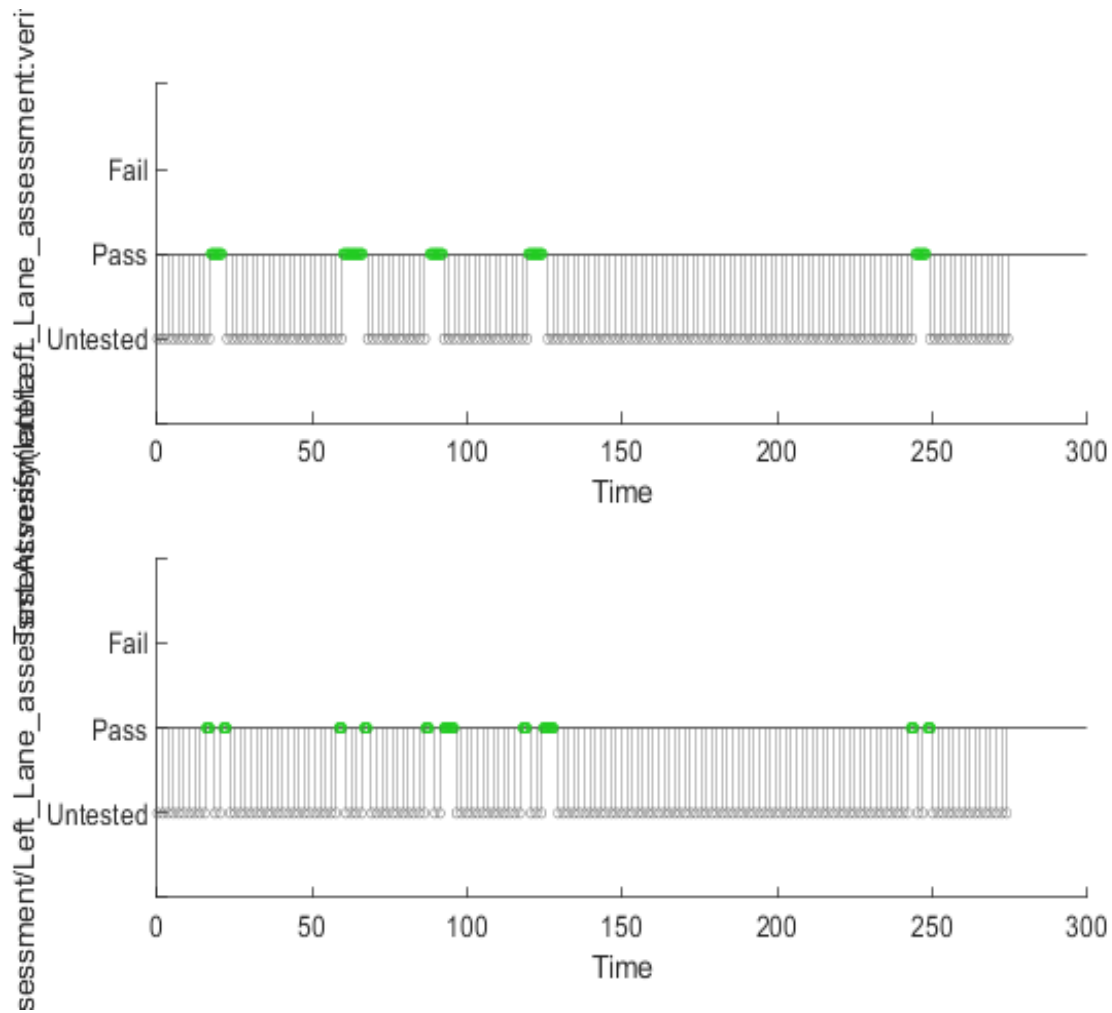
Test Case Information

Name: A14 Highway
Type: Simulation Test

Verify Result

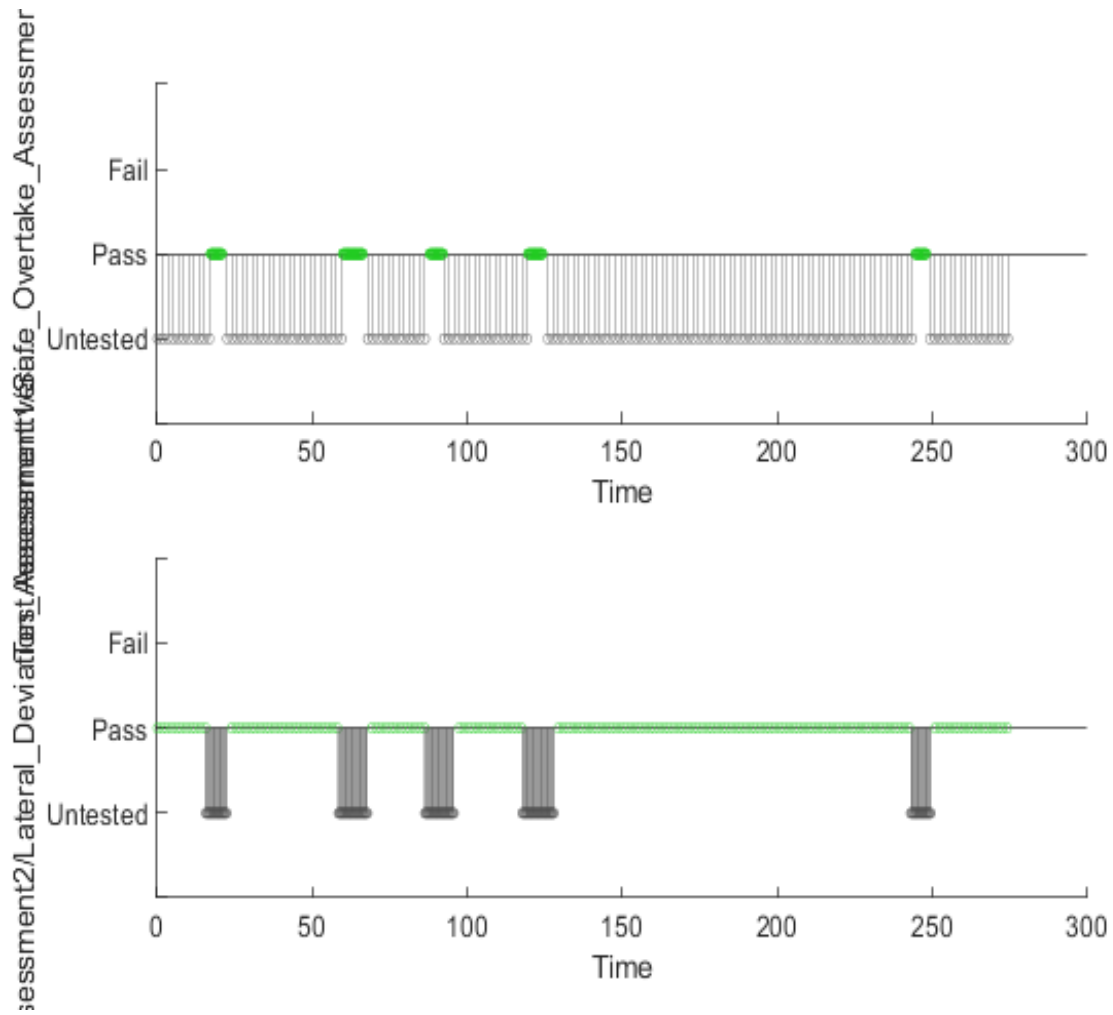
Name	Link to Plot
✓ Test Assessment/Left_Lane_assessment:verify(lateral_dev >= 2 && lateral_dev <= 6)	Link
✓ Test Assessment/Left_Lane_assessment:verify(lateral_dev < 6)	Link
✓ Test Assessment1/Safe_Overtake_Assessment:verify(duration(lateral_dev > 5 && lateral_dev < 3,sec)<1)	Link
✓ Test Assessment2/Lateral_Deviation_Assessment:verify(duration(lateral_dev > 0.75,sec)<1)	Link
✓ Test Assessment3/Maximum_Lateral_Deviation_Assessment:verify(lateral_dev < 1)	Link
✓ Lateral Acceleration Assessment/Global_Assessment:verify(duration(Lateral_acceleration>=2,sec)<=0.5)	Link

Name
✓ Test Assessment/Left_Lane_assessment:verify(lateral_dev >= 2 && lateral_dev <= 6)
✓ Test Assessment/Left_Lane_assessment:verify(lateral_dev < 6)



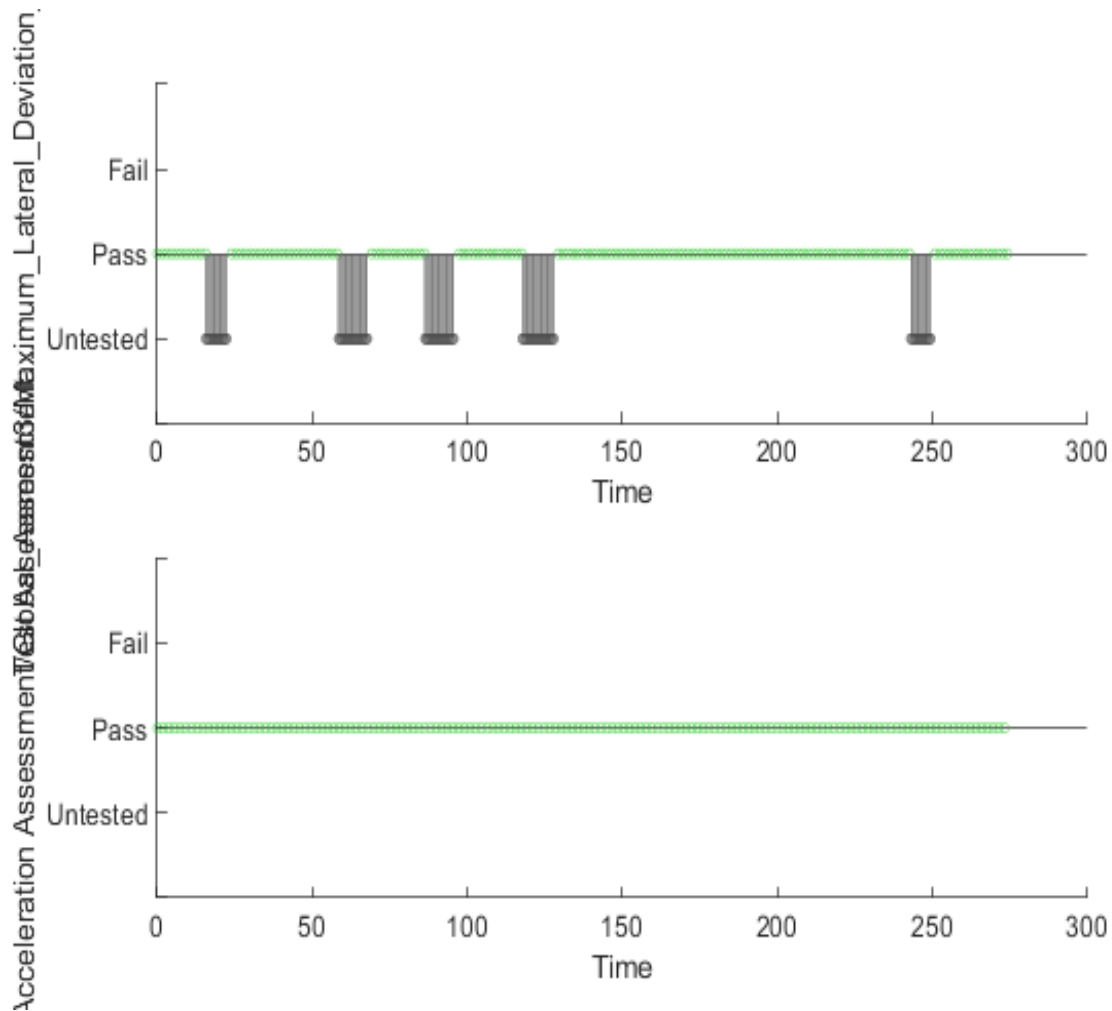
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Name	
✓	Test Assessment1/Safe_Overtake_Assessment:verify(duration(lateral_dev > 5 && lateral_dev < 3,sec)<1)
✓	Test Assessment2/Lateral_Deviation_Assessment:verify(duration(lateral_dev > 0.75,sec)<1)



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Name	
✓	Test Assessment3/Maximum_Lateral_Deviation_Assessment:verify(lateral_dev < 1)
✓	Lateral Acceleration Assessment/Global_Assessment:verify(duration(Lateral_acceleration>=2,sec)<=0.5)



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Simulation

System Under Test Information

Model:	Dynamic_obstacle_avoidance
Harness:	Avoidance_Real_Scenario
Harness Owner:	Dynamic_obstacle_avoidance/Subsystem
Release:	Current
Simulation Mode:	normal

Override SIL or PIL0

Mode:

Configuration Set:Configuration1

Start Time:0

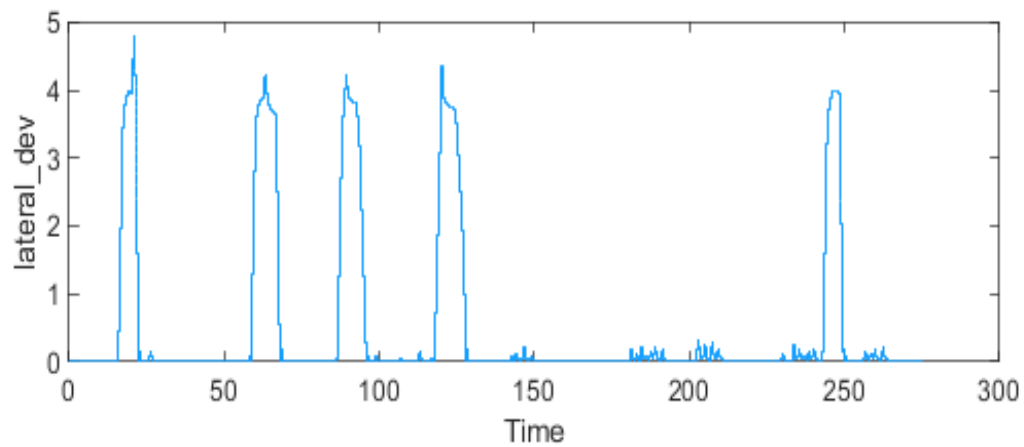
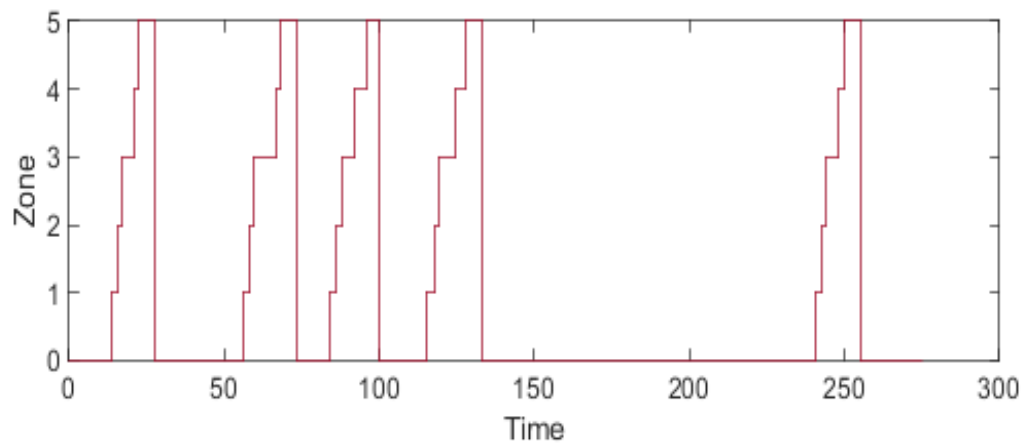
Stop Time:275.08204274327625

Checksum:3560003545 2638914006 1526288829 1442388740

Simulation Output

Name	Data Type	Units	Sample Time	Interp	Sync	Link to Plot
Zone	double		0.01	zoh	union	Link
lateral_dev	double		0.01	zoh	union	Link

Name	Data Type	Units	Sample Time	Interp	Sync
Zone	double		0.01	zoh	union
lateral_dev	double		0.01	zoh	union



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Puglia

Test Result Information

Result Type: Test Case Result
Parent: [Avoidance in real scenario \(Volkswagen Beetle\)](#)
Start Time: 10-Jun-2021 18:38:17

End Time: 10-Jun-2021 18:40:53
Outcome: Passed

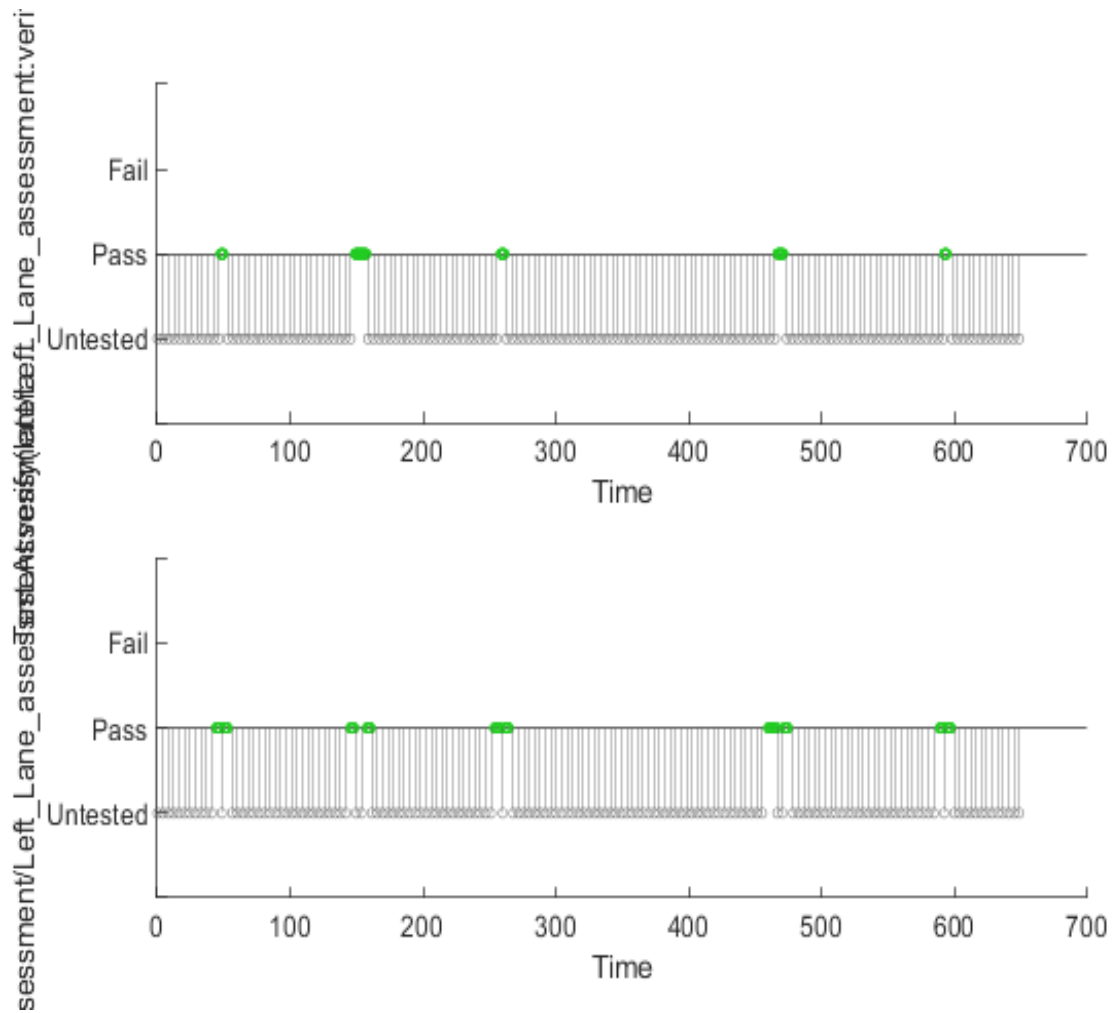
Test Case Information

Name: Puglia
Type: Simulation Test

Verify Result

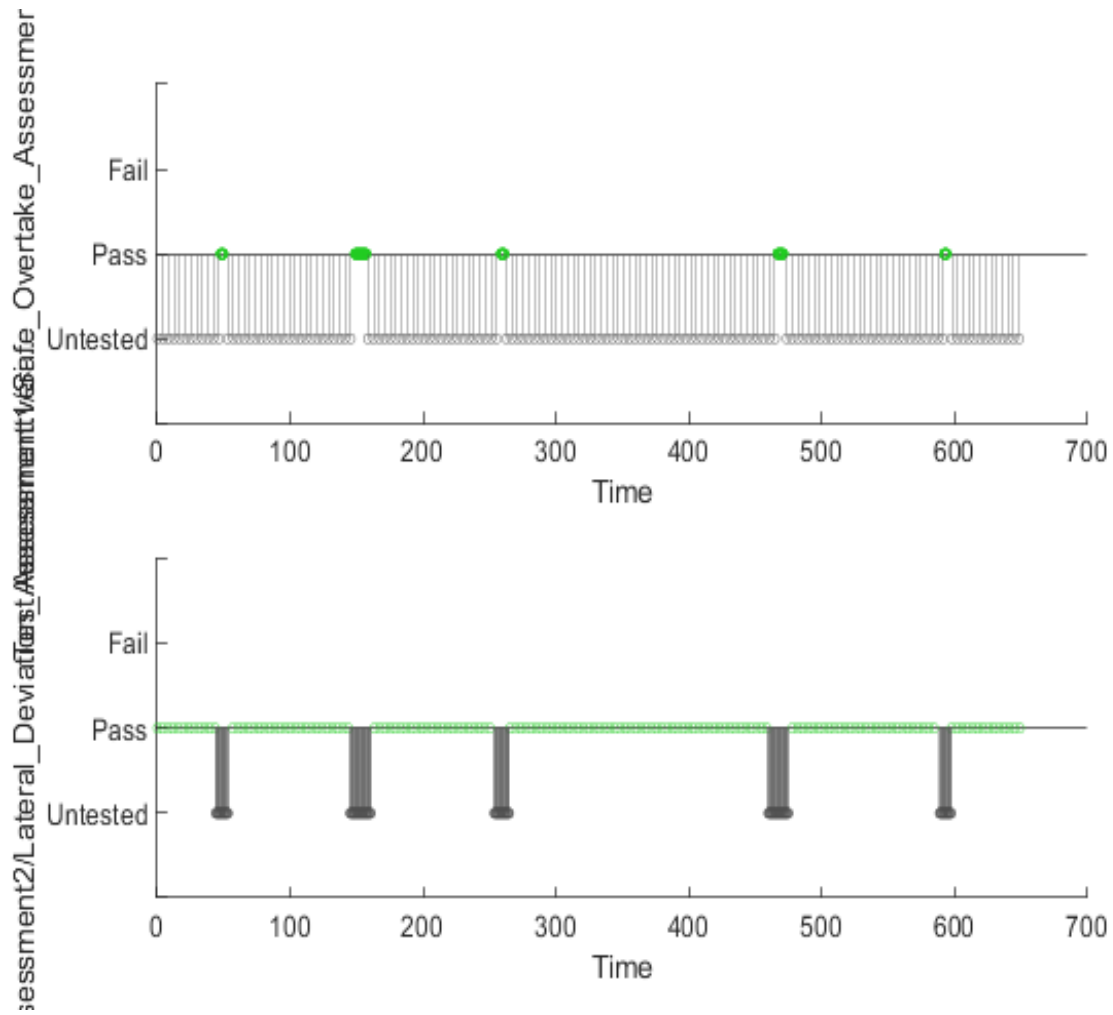
Name	Link to Plot
✓ Test Assessment/Left_Lane_assessment:verify(lateral_dev >= 2 && lateral_dev <= 6)	Link
✓ Test Assessment/Left_Lane_assessment:verify(lateral_dev < 6)	Link
✓ Test Assessment1/Safe_Overtake_Assessment:verify(duration(lateral_dev > 5 && lateral_dev < 3,sec)<1)	Link
✓ Test Assessment2/Lateral_Deviation_Assessment:verify(duration(lateral_dev > 0.75,sec)<1)	Link
✓ Test Assessment3/Maximum_Lateral_Deviation_Assessment:verify(lateral_dev < 1)	Link
✓ Lateral Acceleration Assessment/Global_Assessment:verify(duration(Lateral_acceleration>=2,sec)<=0.5)	Link

Name
✓ Test Assessment/Left_Lane_assessment:verify(lateral_dev >= 2 && lateral_dev <= 6)
✓ Test Assessment/Left_Lane_assessment:verify(lateral_dev < 6)



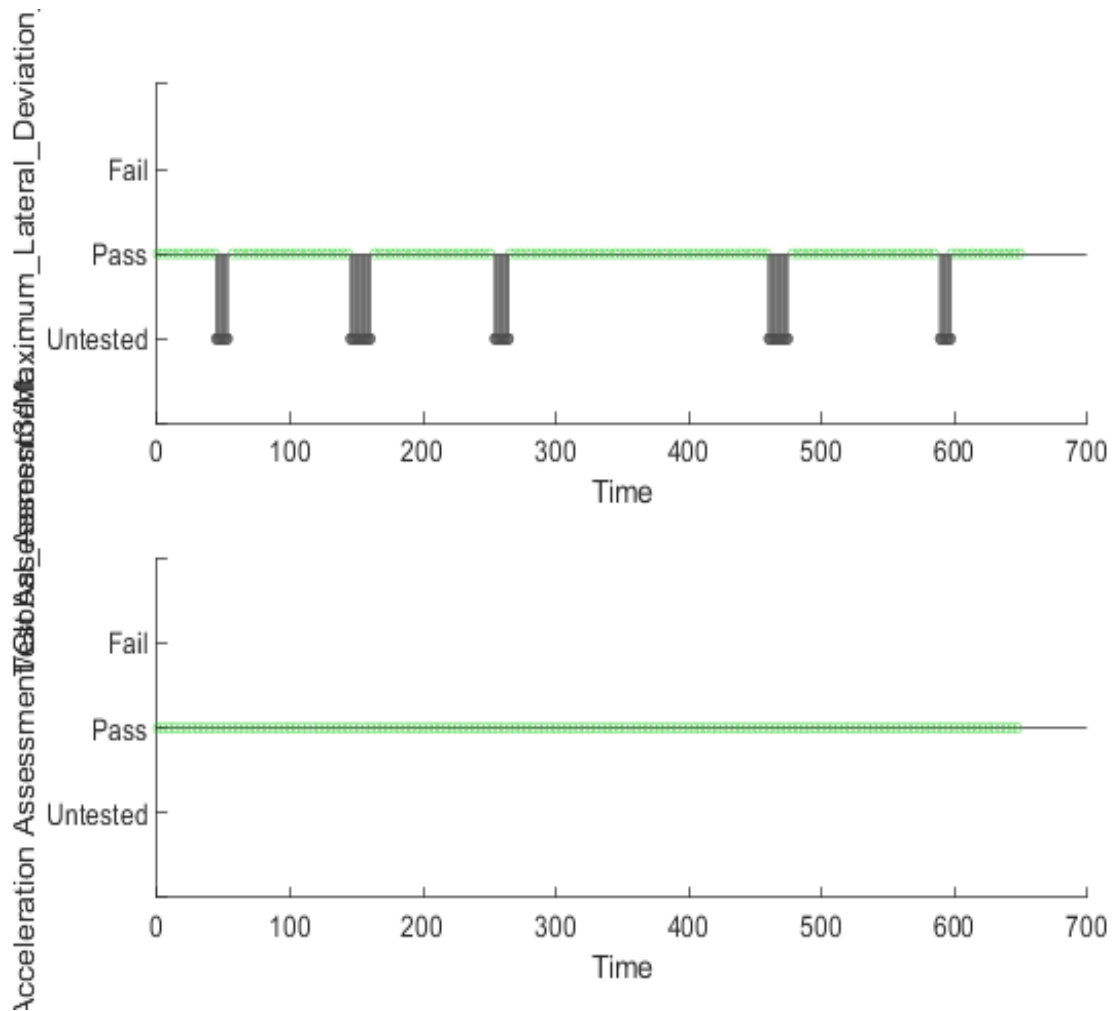
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Name	
✓	Test Assessment1/Safe_Overtake_Assessment:verify(duration(lateral_dev > 5 && lateral_dev < 3,sec)<1)
✓	Test Assessment2/Lateral_Deviation_Assessment:verify(duration(lateral_dev > 0.75,sec)<1)



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Name	
✓	Test Assessment3/Maximum_Lateral_Deviation_Assessment:verify(lateral_dev < 1)
✓	Lateral Acceleration Assessment/Global_Assessment:verify(duration(Lateral_acceleration>=2,sec)<=0.5)



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Simulation

System Under Test Information

Model:	Dynamic_obstacle_avoidance
Harness:	Avoidance_Real_Scenario
Harness Owner:	Dynamic_obstacle_avoidance/Subsystem
Release:	Current
Simulation Mode:	normal

Override SIL or PIL0

Mode:

Configuration Set:Configuration1

Start Time:0

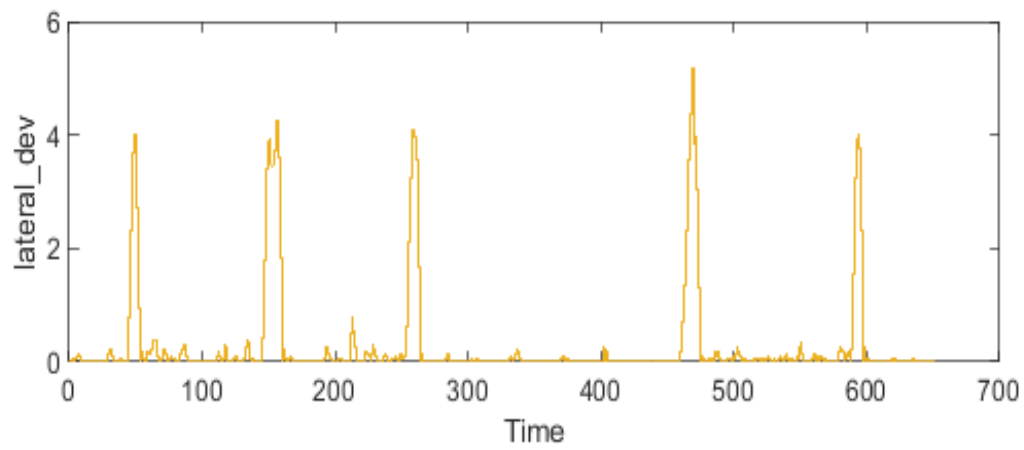
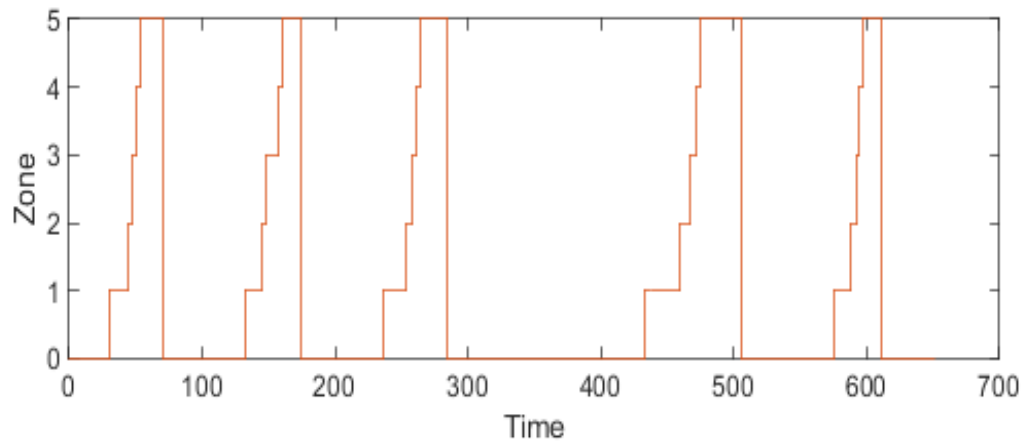
Stop Time:651.65546907329588

Checksum:3966393457 781830547 740493527 1266367321

Simulation Output

Name	Data Type	Units	Sample Time	Interp	Sync	Link to Plot
Zone	double		0.01	zoh	union	Link
lateral_dev	double		0.01	zoh	union	Link

Name	Data Type	Units	Sample Time	Interp	Sync
Zone	double		0.01	zoh	union
lateral_dev	double		0.01	zoh	union



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Indianapolis Motor Speedway

Test Result Information

Result Type: Test Case Result
Parent: [Avoidance in real scenario \(Volkswagen Beetle\)](#)
Start Time: 10-Jun-2021 18:40:53

End Time: 10-Jun-2021 18:41:42
Outcome: Passed

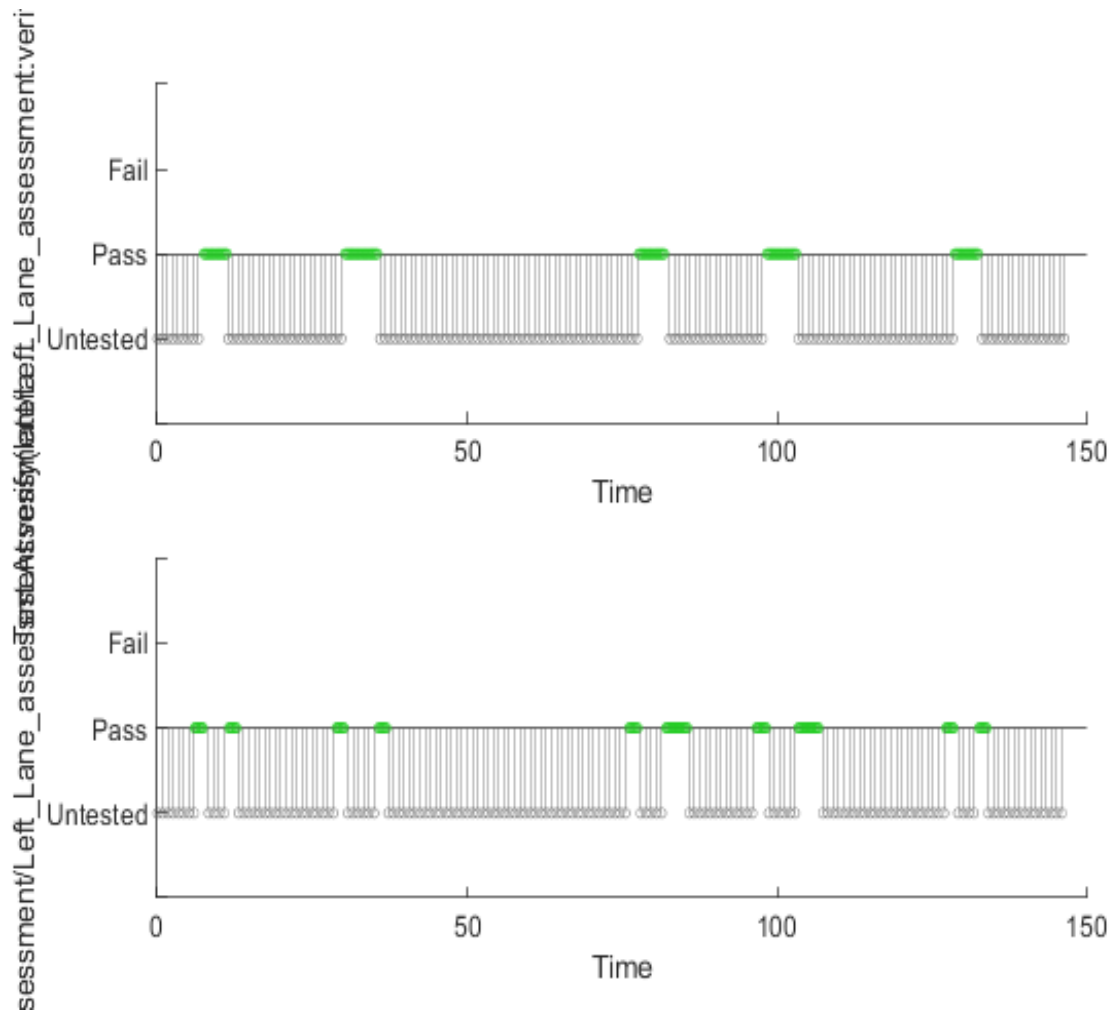
Test Case Information

Name: Indianapolis Motor Speedway
Type: Simulation Test

Verify Result

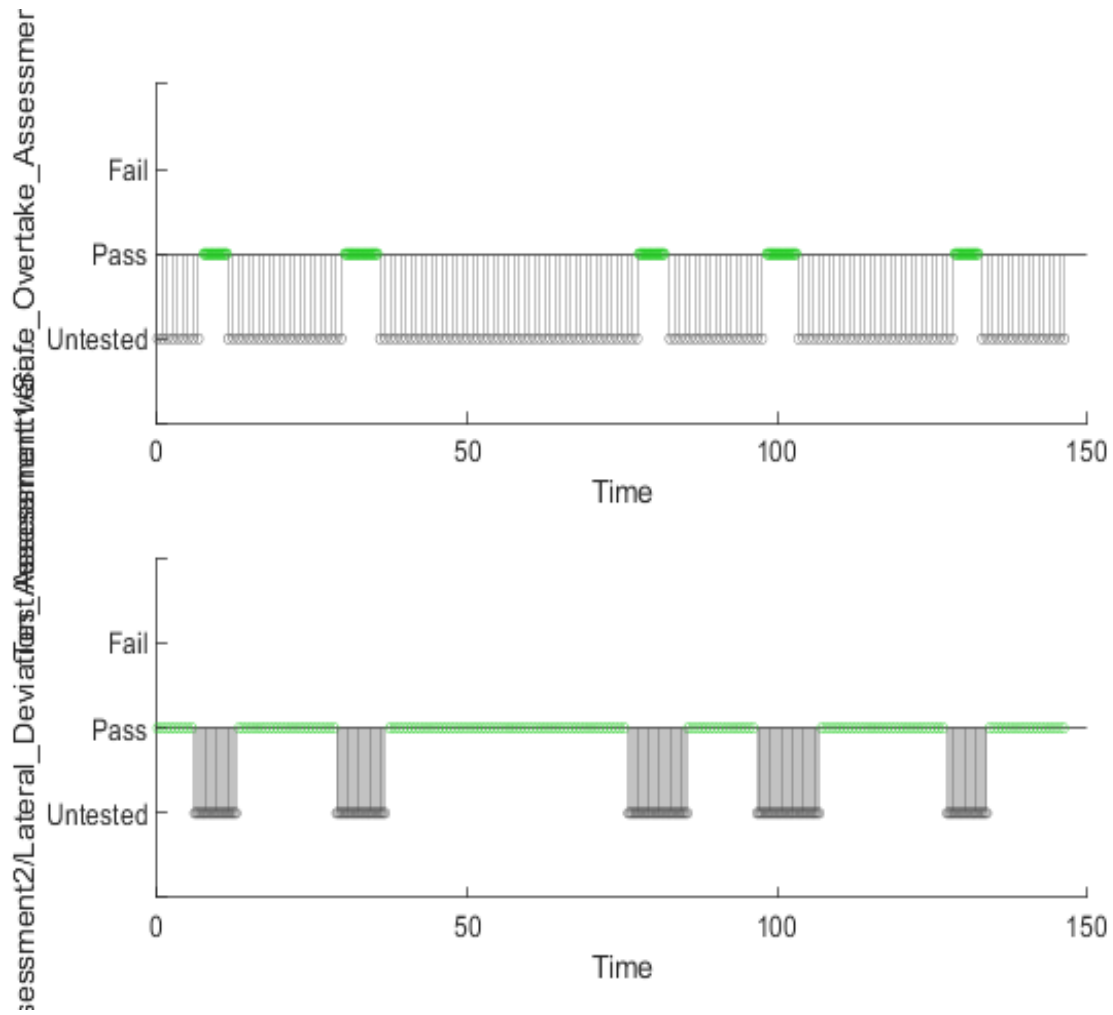
Name	Link to Plot
✓ Test Assessment/Left_Lane_assessment:verify(lateral_dev >= 2 && lateral_dev <= 6)	Link
✓ Test Assessment/Left_Lane_assessment:verify(lateral_dev < 6)	Link
✓ Test Assessment1/Safe_Overtake_Assessment:verify(duration(lateral_dev > 5 && lateral_dev < 3,sec)<1)	Link
✓ Test Assessment2/Lateral_Deviation_Assessment:verify(duration(lateral_dev > 0.75,sec)<1)	Link
✓ Test Assessment3/Maximum_Lateral_Deviation_Assessment:verify(lateral_dev < 1)	Link
✓ Lateral Acceleration Assessment/Global_Assessment:verify(duration(Lateral_acceleration>=2,sec)<=0.5)	Link

Name
✓ Test Assessment/Left_Lane_assessment:verify(lateral_dev >= 2 && lateral_dev <= 6)
✓ Test Assessment/Left_Lane_assessment:verify(lateral_dev < 6)



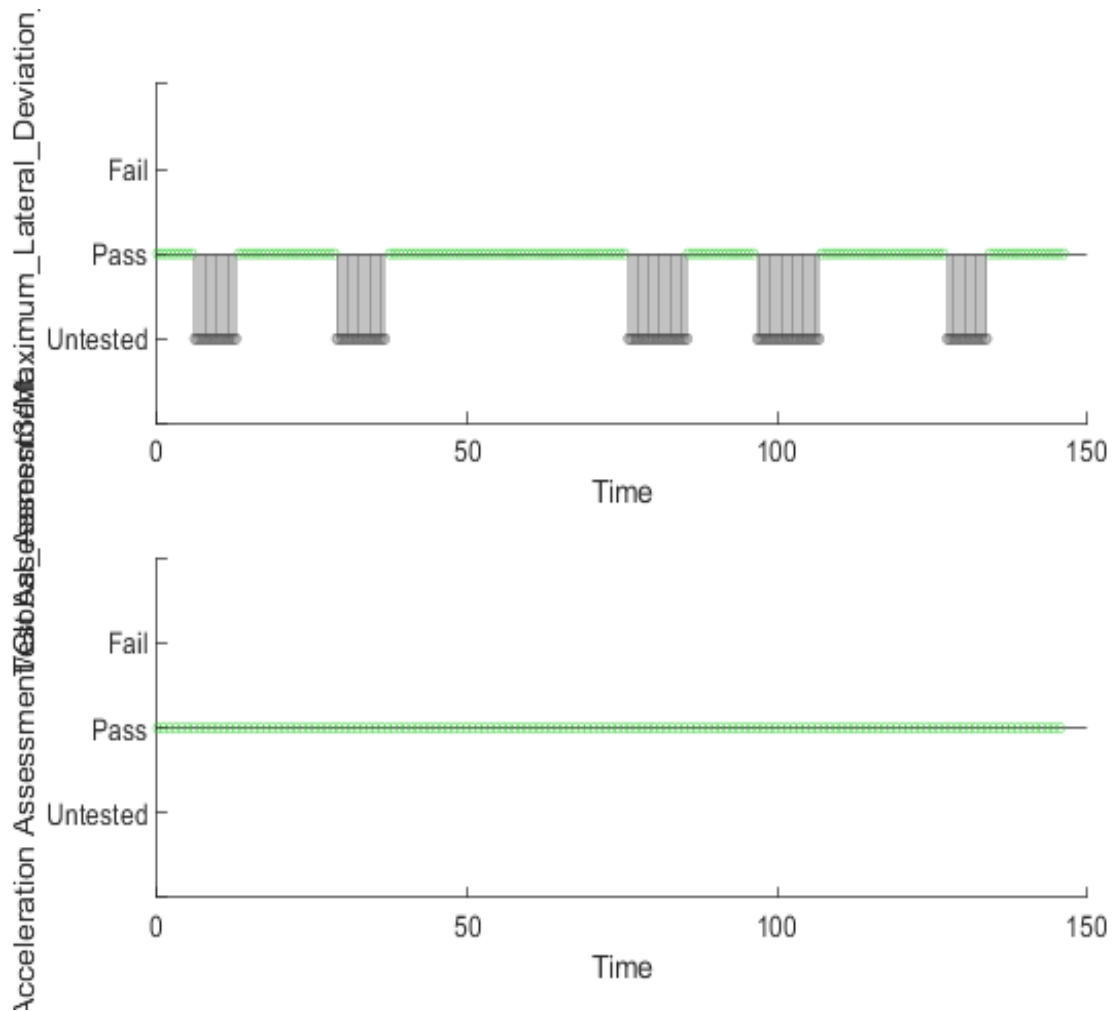
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Name	
✓	Test Assessment1/Safe_Overtake_Assessment:verify(duration(lateral_dev > 5 && lateral_dev < 3,sec)<1)
✓	Test Assessment2/Lateral_Deviation_Assessment:verify(duration(lateral_dev > 0.75,sec)<1)



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Name	
✓	Test Assessment3/Maximum_Lateral_Deviation_Assessment:verify(lateral_dev < 1)
✓	Lateral Acceleration Assessment/Global_Assessment:verify(duration(Lateral_acceleration>=2,sec)<=0.5)



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Simulation

System Under Test Information

Model:	Dynamic_obstacle_avoidance
Harness:	Avoidance_Real_Scenario
Harness Owner:	Dynamic_obstacle_avoidance/Subsystem
Release:	Current
Simulation Mode:	normal

Override SIL or PIL0

Mode:

Configuration Set:Configuration1

Start Time:0

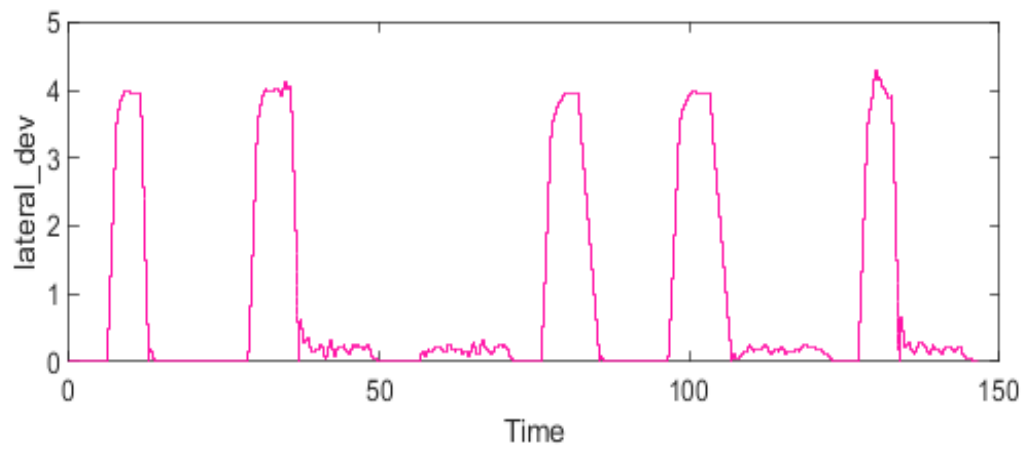
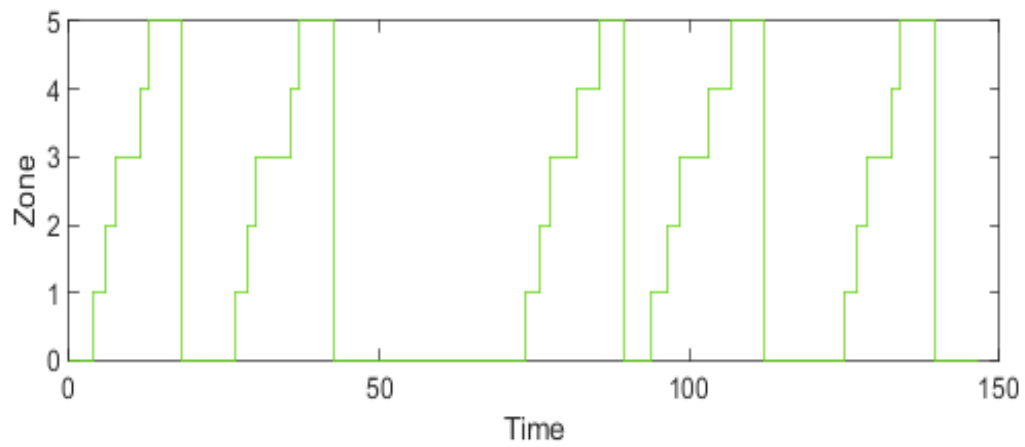
Stop Time:146.51791178475014

Checksum:206311103 3317914342 182976386 2468747102

Simulation Output

Name	Data Type	Units	Sample Time	Interp	Sync	Link to Plot
Zone	double		0.01	zoh	union	Link
lateral_dev	double		0.01	zoh	union	Link

Name	Data Type	Units	Sample Time	Interp	Sync
Zone	double		0.01	zoh	union
lateral_dev	double		0.01	zoh	union



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