

**INSTRUCTIONS:**

Fill out the hazard analysis and risk assessment below.

HA-001 should be for the lane departure warning function as discussed in the lecture.

HA-002 should be for the lane keeping assistance function as discussed in the lecture.

Then come up with your own situations and hazards for the lane assistance system. Fill in

When finished, export your spreadsheet as a pdf file so that a reviewer can easily see your

Hazard ID	Situational Analysis			
	Operational Mode	Operational Scenario	Environmental Details	Situation Details
HA-001	OM03 - Normal Driving	OS04 - Highway	EN06 - Rain	SD02 - High Speed
HA-002	OM03 - Normal Driving	OS03 - Country Road	EN01 - Normal	SD02 - High Speed
HA-003	OM03 - Normal Driving	OS02 - City Road	EN01 - Normal	SD02 - High Speed
HA-004	OM03 - Normal Driving	OS02 - City Road	EN01 - Normal	SD02 - High Speed

the HA-003 and HA-004 rows.  
work.

Analysis			
Other Details (optional)	Item Usage (function)	Situation Description	Function
	IU01 - Correctly	Normal Driving on Highway with High	Lane Departure
	IU02 - Incorrectly	Normal Driving on Country Road with	Lane Keeping
	IU02 - Correctly	Normal Driving on City road with High	Lane Keeping
	IU01 - Correctly	Normal Driving on City road with High	Lane Keeping

Hazard Identification			
Deviation	Deviation Details	Hazardous Event (resulting effect)	Event Details
DV04 - Actor	Lane Departure warning	EV00 - Collision with	Too much oscillation may result in
DV03 -	Lane Keeping assistance	EV00 - Collision with	Driver uses system as car is fully
DV19 - Sensor	Camera ECU subsystem in	EV00 - Collision with	because of incorrect lane
DV04 - Actor	Lane Keeping assistance	EV00 - Collision with	Too much steering torque may

Hazard			
Hazardous Event Description	Exposure (of situation)	Rationale (for exposure)	Severity (of potential harm)
Lane departure warning	E3 - Medium	Normal driving on Highway with	S3 - Life-threatening or
Driver do not use function	E2 - Low	Driving on a country road and	S3 - Life-threatening or
Camera ECU subsystem in	E4 - High	Normal driving on City road with	S3 - Life-threatening or
Lane keeping assistance	E4 - High	Normal driving on City road with	S3 - Life-threatening or

**dous Event Classification**

<b>Rationale (for severity)</b>	<b>Controllability (of hazardous event)</b>	<b>Rationale (for controllability)</b>
Collision at high	C3 - difficult to control	It is very difficult to control car at high speed
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Determination of ASIL and Safety Goals	
ASIL Determination	Safety Goal
C	The Oscillation of steering wheel by
B	The lane keeping assistance system
D	Camera ECU malfunction shall be
D	The lane keeping assistance system