

**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	OS02 - City Road	EN07 - Snow	SD02 - High speed
HA-002	OM03 - Normal Driving	OS03 - Country Road	EN01 - Normal	SD02 - High speed
HA-003	OM03 - Normal Driving	OS04 - Highway	EN01 - Normal	SD02 - High speed
HA-004	OM03 - Normal Driving	OS03 - Country 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 City Road covered	Lane Departure
	IU02 - Incorrectly	A driver misused the function as	Lane Keeping
	IU01 - Correctly	Normal driving on Highway during rain	Lane Departure
	IU01 - Correctly	Normal driving on a country road during	Lane Keeping

Hazard Identification			
Deviation	Deviation Details	Hazardous Event (resulting effect)	Event Details
DV11 - Actor	The LDW function	EV03 - Car spins out	lanes are not clear
DV03- Function	The LKA function always	EV00 - Collision with	Vehicle hits other vehicles as the
DV04- Actor	The LDW function	EV00 - Collision with	High haptic feedback can affect
DV02 - function	The camera sensor stop	EV00 - Collision with	The Lane Keeping Assistance

Hazard			
Hazardous Event Description	Exposure (of situation)	Rationale (for exposure)	Severity (of potential harm)
The LDW function	E1 - Very low	once in a year or less.	S3 - Life-threatening or
The LKA keeps the car in the	E2 - Low	Normal driving on a country road	S3 - Life-threatening or
The LDW function applies too	E3 - Medium	Driving On slippery Highway	S3 - Life-threatening or
The Lane Keeping Assistance	E3 - Medium	Driving on a highway with rain	S3 - Life-threatening or

**dous Event Classification**

<b>Rationale (for severity)</b>	<b>Controllability (of hazardous event)</b>	<b>Rationale (for controllability)</b>
On high speed, car	C3 - Difficult to control or	less than 90% of drivers can control
On country road with	C3 - Difficult to control or	Since both hands not on the steering wheel, the
Highway Speed limits	C3 - Difficult to control	less than 90% of all drivers were able to avoid
Collitions at high	C3 - Difficult to control or	When the driver loose control of the vechicle is

Determination of ASIL and Safety Goals	
ASIL Determination	Safety Goal
A	The oscillating torque from the Lane
B	The lane keeping assistance function
C	The oscillating torque from the Lane
C	The Lane Keeping Assistance function