

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-High way	EN01-Normal conditions	SD02-High speed
HA-002	OM03-Normal driving	OS03-Country roads	EN01-Normal	SD02-High speed
HA-003	OM03-Normal driving	OS04-High way	EN01- Normal	SD02-High speed
HA-004	OM03-Normal driving	OS04-High way	EN03-Foggy	SD02-High speed

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

Analysis			
Other Details (optional)	Item Usage (function)	Situation Description	Function
	ID01-Correctly	Normal driving on highway during normal	Lane Departure
	ID02-Incorrectly	Normal driving on country roads during	Lane Keeping
	ID01-Correctly	Normal driving on highway during normal	Lane Keeping
	ID01-Correctly	Normal driving on highway during fog at	Lane Departure

Hazard Identification			
Deviation	Deviation Details	Hazardous Event (resulting effect)	Event Details
DV04- Actor	Lane departure warning	EV00 - Collision with	LDW provides too much
DV03 -Function	Lane keeping assistance	EV00 - Collision with	Driver misuses the lane keeping
DV10- Actor	Lane keeping assistance	EV04 - Car comes off	Due to delayed activation of lane
DV03- Function	Lane departure warning	EV04-Car comes off	Driver can steer the vehicle off the

Hazard			
Hazardous Event Description	Exposure (of situation)	Rationale (for exposure)	Severity (of potential harm)
LDW function applies very high	E3 - Quite often	Driving on wet road occurs quite	S3 - life threatening or
The driver misuses the system	E2- Doesn't	The combination of driver misusing	S3 - life threatening or
Vehicle departs from the lane	E2- Doesn't	This could be due to timing error	S3 - life threatening or
Unexpected functioning of LDV	E3-Highway	Driving in foggy weather	S3 - life threatening or

dous Event Classification

Rationale (for severity)	Controllability (of hazardous event)	Rationale (for controllability)
Driver is traveling at	C3- Uncontrollable	Driver could not control the vehicle due to high
Driver is traveling at	C3- Uncontrollable	Hands aren't on the wheel at high speeds, a
Driver is traveling at	C2- Normally	Can be controlled by driver if he is alert and
Driver is traveling at	C3- Uncontrollable	Wrong steering action by driver maybe

Determination of ASIL and Safety Goals	
ASIL Determination	Safety Goal
C	The oscillating torque provided by lande
B	The lane keeping assistance system
A	The system shall continously monitor
C	The lane departure warning function