INSTRUCTIONS:
Fill out the hazard analysis and risk assessment below.
HA-001 should be for the lane departure warning function as discussed in the
HA-002 should be for the lane keeping assistance function as discussed in the
Then come up with your own situations and hazards for the lane assistance sy
When finished, export your spreadsheet as a pdf file so that a reviewer can ea

Hazard ID			
	Operational Mode	**Operational Scenario**	**Environmental Details**
HA-001	OM03 - Normal driving	OS04 - Highway	EN06 - Rain (slippery road)
HA-002	OM03 - Normal driving	OS03 - Country Road	EN01 - Normal conditions
HA-003	OM04 - Backward driving	OS01 - Any Road	EN01 - Normal conditions
HA-004	OM06 - Towing (active)	OS03 - Country Road	EN06 - Rain (slippery road)

lecture.
e lecture.
ystem. Fill in the HA-003 and HA-004 rows.
sily see your work.

Situational Analysis		
Situation Details	**Other Details (optional)**	**Item Usage (function)**
SD02 - High speed		IU01 - Correctly used
SD02 - High speed		IU02 - Incorrectly used
SD01 - Low speed		IU01 - Correctly used
SD02 - High speed		IU01 - Correctly used

Situation Description	Function
Normal driving on wet highway	Lane Departure
Driver is misusing lane keeping assitance function as fully autonomous	Lane Keeping
Backing up on any road	Lane Departure
Towing vehicle on country road in rain	Lane Keeping

Deviation	Deviation Details
DV04 - Actor effect is too much	Departure warning too much
DV11 - Actor effect is wrong	Actor using system as autonomous driving
DV10 - Actor effect is reverse	Departure warning while reversing
DV11 - Actor effect is wrong	Actor using system as autonomous driving

Hazard Identification	
Hazardous Event (resulting effect)	**Event Details**
EV00 - Collision with other vehicle	Vehicle crashes into other vehicle with injury to driver
EV00 - Collision with other vehicle	Vehicle crashes into other vehicle with injury to driver
EV-01 - Side collision with obstacle	Vehicle crashes into obstacle with injury to driver
EV00 - Collision with other vehicle	Vehicle crashes into other vehicle with injury to driver

Hazardous Event Description	Exposure (of situation)
Vibration too severe at highway speed	E3 - Medium probability
Steer correction is misinterpreted as autonomous driving leading to crash	E2 - Low probability
Vibration during complex driving scenario	E4 - High probability
Steer correction is misinterpreted as autonomous driving leading to crash	E2 - Low probability

Hazardous Event Cla	
Rationale (for exposure)	**Severity (of potential harm)**
Driving on highway in wet roads somewhat common	S3 - Life-threatening or fatal injuries
Driving on country road and misusing uncommon	S3 - Life-threatening or fatal injuries
Driving in reverse very common	S1 - Light and moderate injuries
Towing in rain uncommon	S3 - Life-threatening or fatal injuries

ssification

Rationale (for severity)	Controllability (of hazardous event)	Rationale (for controllability)
High speed collision	C3 - Difficult to control or uncontrollable	Hard to control on wet road
High speed collision	C3 - Difficult to control or uncontrollable	Not controllable
Low speed collision	C1 - Simply controllable	Simple to control at low speeds
High speed collision	C3 - Difficult to control or uncontrollable	Difficult to control due to rain and towing

ASIL Determination
C
B
QM
B

Determination of ASIL and Safety Goals
Safety Goal
The oscillating steering torque from the lane departure warning function shall be limited
The lane keeping assistance function shall be time limited, and the additional steering torque shall end after a given
The oscillating steering torque from the lane departure warning function shall be disabled during reverse
The lane keeping assistance function shall be time limited, and the additional steering torque shall end after a given