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CSE870 Adv. Software Engineering
Requirements Document Inspection Assignment
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Review Document: TeamX SRS-v1
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Foreword: Comments highlighted in <mark>yellow</mark> mark writing/presentation related issues, comments highlighted in <mark>green</mark> mark content related issues, pre-existing "requirements from other teams" comments highlighted in yellow were recolored to <mark>orange</mark> to avoid confusion.

Highlighted Comments:

Page #	Type	Issue / Concern
1	Writing	"Stakeholder" and "designer" should be plural.
1	Writing	Inconsistent spelling of "Lidar" throughout the document - "Lidar", "lidar", or "LiDAR"?
2	Content	How is the RSS system differentiating between objects and pedestrians? Is there any functional difference?
2	Writing	"Charged Coupled Device (CCD)".
2	Writing	"Earth's gravity".
2	Writing	Definition sentences should end with a period.
2	Writing	"Miles per hour".
3	Writing	"...based on the vehicle."
3	Content	Three inches is a very small margin for braking and stopping the vehicle completely. Vehicle velocity and brake condition/quality significantly affect the required braking distance.
4	Writing	The "Technicians have high expertise…" sentence should be its own bullet point.
4	Content	What are these "risk levels" used for determining braking force? Three inches is already a very short window for braking.

5	Writing	"central controller capable of processing…"
5	Content	Redundant detection of what specifically?
5	Writing	Inconsistent spelling of "LiDAR".
5	Writing	"low-light and diverse weather conditions".
5	Content	What does it mean that the vehicle "includes automatic braking"?
5	Content	What does it mean that the "central controller system never fails"? What are the failure events/conditions for this system?
5	Content	The sensor data is processed "every" or "within" 100ms? Inconsistent usage throughout the document, with two very different functional implications.
5	Writing	The sentence "The system functions in rain, snow, fog, winds, daytime and nighttime" should end with a period.
6	Writing	"The braking system…"
6	Content	Only "pedestrian" detection depends on sensor coverage and not "object" detection? How are these two differentiated and handled differently?
6	Writing	All of the "2.6 Deferred Requirements" sentences should end with a period.
6	Content	Is it necessary for the "3.1 Requirements" section to include sentence revisions, corrections, etc.? This makes the whole section very messy and confusing to read.
6	Content	Which "physical pedal"?
6	Writing	The sentence "...object is three inches away or projected to be under three inches no matter what sensor picked it up" is confusing to read.
6	Content	What does it mean that the object is "projected to be under three inches"?
7	Writing	"to alert the driver in situations where detected objects are within.."
7	Content	Specify where the detected objects have to be within 6 feet in relation to the vehicle.
7	Content	What "other activate sounds from the system"?
7	Writing	The 4.2 sentences all need to end with a period.

7	Content	Requirement 4.2.1 is not actually a requirement.
7	Content	For requirement 5, when and how are these surrounding cameras used by the system or interacted with by the user?
7	Content	I don't understand what the specification "and at least two vertical feet from the base of the tires in the 4 feet around the car" means.
7	Writing	"...process the incoming data within 100ms".
8	Writing	Inconsistent spelling usage of "g" unit.
9	Content	"Any information that was not included in either member's assignments but needed, was added at the end." I don't understand what this means.
9	Writing	"Weather and lighting conditions, such as wind, rain, fog, snow, daytime, nighttime, etc. It can affect the camera system's capability by skewing the image quality of the camera. It can…" Improper sentences.
9	Content	"...weather can impact the pressure system with harsh wind" To my understanding, wind can cause erratic differential pressure readings, especially when using outside air for a static pressure reference. Maybe this wouldn't be the most reliable sensor.
10	Content	"...if the image is a high-resolution image, which means it is 1080p or 4k." How does a camera fluctuate in resolution quality based on external conditions?
10	Writing	"The system consists of both software and hardware components working together…"
10	Writing	"It can be broken or cannot function correctly." Improper sentence.
10	Writing	"...from the risk of breaking during usage."
10	Content	"...cause the laser to get lost." What does this mean?
10	Content	"...lead to false and missed objects" Elaborate on this.
10	Content	"...continuously run tests…" How frequently and what kind of tests?
10	Writing	"non-operational"
10	Content	"multiple overlapping views" What does this mean?
10	Writing	"...sensors of the vehicle".
11	Writing	"Pedestrians and their…"

11	Writing	"...especially when only visible for a split second…"
11	Content	"Allowing for a collation to happen if the computer is not processing the incoming data quickly enough." What does this mean?
11	Content	Process all sensors within or every 100ms?
11	Writing	Inconsistent usage of "100 MS".
11	Content	FOV with respect to what?
11	Writing	"These sensors include…"
11	Writing	Inconsistent spelling of "lidar".
12	Writing	"…Reverse Safety System."
16	Content	Is it necessary to include "Old version of use case diagram"?
17	Writing	"...software implementations."
22	Writing	"Central Controller"
24	Writing	Inconsistent usage of "Display" system.
40	Writing	"Once the cameras are activated…"
44	Writing	Inconsistent capitalization of "Alert System".
45	Content	The Automatic Braking System only disengages manually and not when the object is no longer detected?
46	Content	Is it the "Central Computer" or "Central Controller" system?
5	Prototype	It seems counter intuitive to me that the driver has to disengage the acceleration pedal in order for the Automatic Braking System to stop the vehicle. It seems like a common scenario that the driver is actively using the acceleration pedal but miscalculates the object distance or isn't paying close attention, and would want the ABS to engage in those situations.
6	Prototype	The car doesn't seem to detect collisions while in reverse. If I fail to disengage the acceleration pedal (reversing) in time and crash into the other objects, my vehicle isn't put into a collision state and I can keep driving into the objects.