



**ARTI 511 - Project Proposal
Term 1 – 2025/2026**

Project Proposal Form

Group #: 9M4

Supervisor's Name: Dr. Mohammad Aftab Alam Khan

Members of the group:

#	Name	ID	Role
1	Mohammed Kamal Hadi	2220004360	Leader
2	Abdulrhman Mohammed Alshehri	2220006250	Member
3	Saud Ali Radwan	2220002478	Member
4	Ahmad Abdulqader Alakhdar	2220002324	Member
5	Ali Ibrahim Asiri	2220000306	Member

Title of the Project:

Optimizing Emergency Response

Introduction of the Project:

This project, "Optimizing Emergency Response," aims to improve how first responders handle car accidents by using AI and computer vision. By using live footage from surveillance cameras and deep learning models like YOLO and CNNs, the system will automatically detect accidents in real-time.

Once an accident is detected, the system will alert emergency services with crucial details. This will help reduce response times and human error, ultimately enhancing road safety and serving as a model for using AI in public safety and smart city initiatives.

Objectives:

- **Detecting Accidents Faster:** We want our system to automatically detect car accidents in real-time using AI and computer vision, so we don't have to rely on someone manually reporting them.
- **Cutting Down Response Time:** By instantly sending alerts to emergency services like police and ambulance, the system will help minimize delays in rescue efforts.
- **Improving Reporting Accuracy:** Our system uses computer vision to provide first responders with reliable information about the accident, minimizing human error and enhancing decision making.
- **Helping with Traffic:** The system could also help reroute nearby traffic, which would prevent congestion caused by the accident.

Project end user:

- **Emergency Response Agencies:** The primary users are police, ambulance, and fire departments. The system's immediate alerts with accurate details will help them get to the scene faster and be better prepared.
- **The General Public:** Civilians will also benefit from enhanced road safety. By detecting accidents quickly, the system can ensure faster medical aid for victims. It can also help traffic management authorities reroute vehicles, leading to smoother traffic flow for everyone.

Signatures of group members:

#	Name	ID	Signature
1	Mohammed Kamal Hadi	2220004360	
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Date: 17/9/2025

----- For supervisor use only -----Approved
Comments:

Not approved

Date: