



FINAL YEAR PROJECT REPORT

**EMERGENCY VECHILCE DETECTION AND
AUTOMATED VEHICLE COMMUNICATION
THROUGH**

**In fulfillment of the requirement
For degree of
BS (COMPUTER SCIENCES)**

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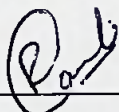
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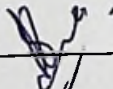
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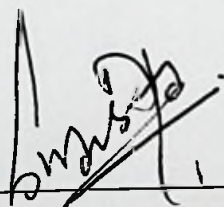
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Specially dedicated to
My beloved grandmother, mother and father
(Rafia Gul)
My beloved grandmother, mother and father
(Sidra Hasan)

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EMERGENCY VEHICLE DETECTION AND AUTOMATED VEHICLE COMMUNICATION THROUGH

ABSTRACT

By sounding their sirens, EVs like ambulances, fire trucks, and police cars may be recognised according to this proposed initiative, the EVD System. We suggest creating an automatic detection system that checks for surrounding vehicle sirens and alerts drivers to be on the lookout, noting that drivers are occasionally ignorant of EV siren warnings, especially when utilising in-car audio systems. In order to classify sounds of the traffic soundscape to siren noises, vehicle horns, and noise, a convolutional neural network (CNN)-based model and Long Short Term Memory (LSTM) are used, which detects EV sound and signals the driver. The suggested system uses audio sensors to capture the siren sound, and then uses a band pass filter to pre-process the signal. Additionally, this effort will provide light on the creation of an intelligent traffic management system for the efficient control of emergency vehicles, thereby assisting in the preservation of life and property. The suggested approach can also function admirably with varying input length, even for little samples. The proposed system might be advantageous for drivers.

KEYWORDS: Emergency Vehicles, Emergency Vehicle
Detection

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