A

Major Project

On

ROAD ACCIDENT SEVERITY AND HOSPITAL RECOMMENDATION USING DEEP LEARNING

(Submitted in partial fulfillment of the requirements for the award of Degree)

BACHELOR OF TECHNOLOGY

in

COMPUTER SCIENCE AND ENGINEERING

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UGC AUTONOMOUS

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ABSTRACT

Road accidents continue to be a big global hazard, killing numerous lives and causing enormous agony and suffering every year. Despite developments in car safety technologies and improved awareness efforts, the rising population and expanding automobile traffic have contributed to an increase in road accidents globally. Tragically, many of these accidents result in severe injuries, underlining the vital need for rapid and accurate assessment of injury severity and timely access to adequate medical care. This project focuses on improving road safety and emergency response by using deep learning to predict road accident severity and recommend suitable hospitals. First, a deep learning model analyzes accident factors like weather, road type, and vehicle details to classify accidents by severity. This allows emergency teams to assess situations quickly and allocate appropriate resources. The second part of the system recommends hospitals based on real-time traffic, location, and hospital capacity, helping responders choose facilities with the needed resources and shortest travel time. Together, these components aim to enhance emergency response efficiency, optimize healthcare resources, and improve public safety.

EXISTING SYSTEM:

Current systems for assessing road accident severity and recommending hospitals may lack the precision and efficiency required for timely and effective emergency response. Manual assessment and rudimentary recommendation systems can lead to delays, potentially impacting the quality of medical care provided to accident victims.

Disadvantages

- Manual Assessment
- Delayed Response and Poor Outcomes
- No Live Severity Assessment
- Reduced Efficiency in Emergency Response

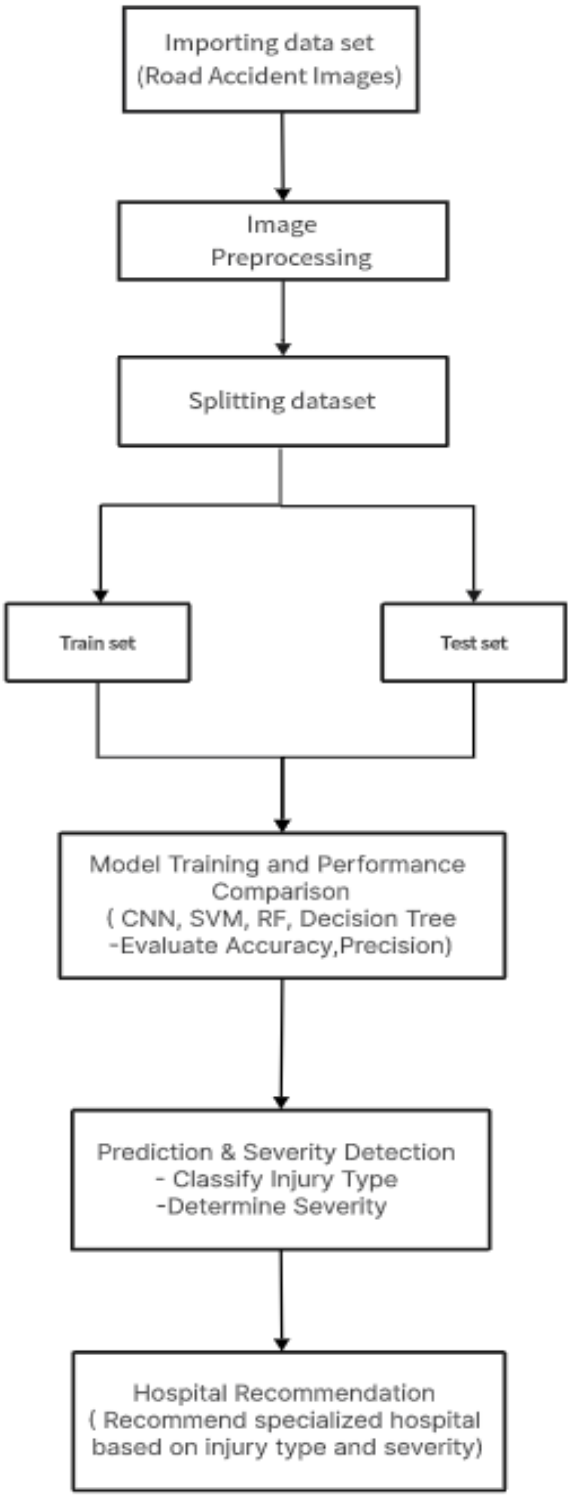
PROPOSED SYSTEM :

Our proposed system aims to address the shortcomings of the existing approach by leveraging deep learning techniques for automated injury severity detection and hospital recommendation. The system utilizes Convolutional Neural Networks (CNNs) to analyze images of road accident injuries and classify them based on type and severity. The proposed system automates the process of injury severity detection, eliminating the need for manual assessment and reducing the risk of human error. Additionally, the system recommends the most appropriate hospital for treatment based on the severity of the injuries detected.

Advantages

- Automated Assessment
- Timely Intervention
- Consistent Recommendations
- Enhanced Accuracy

SYSTEM ARCHITECTURE :



REQUIREMENT SPECIFICATION

HARDWARE REQUIREMENTS:

- Processor : i3 or above
- RAM : 8 GB (min)
- Hard Disk : 40 GB

SOFTWARE REQUIREMENTS:

- Operating system : Windows 8 or Above.
- Coding Language : Python.