



# ClearSightADAS – Weather Resilient Road & Traffic Sign Detection & Recognition for ADAS

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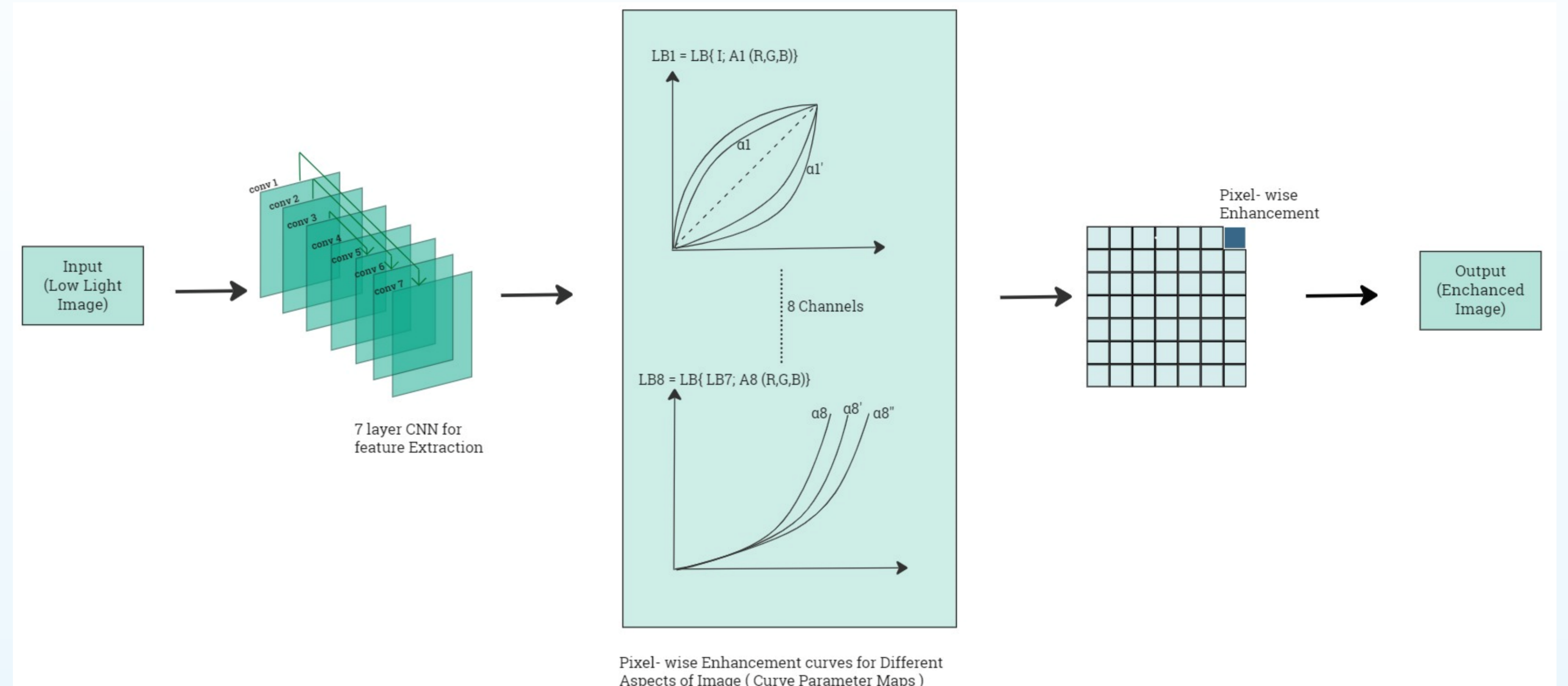
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**Abstract-** We developed a single algorithm capable of enhancing images affected by adverse weather conditions such as rain, fog, and low light. The resulting clear images enable accurate detection and recognition of traffic and road signs during adverse weather.

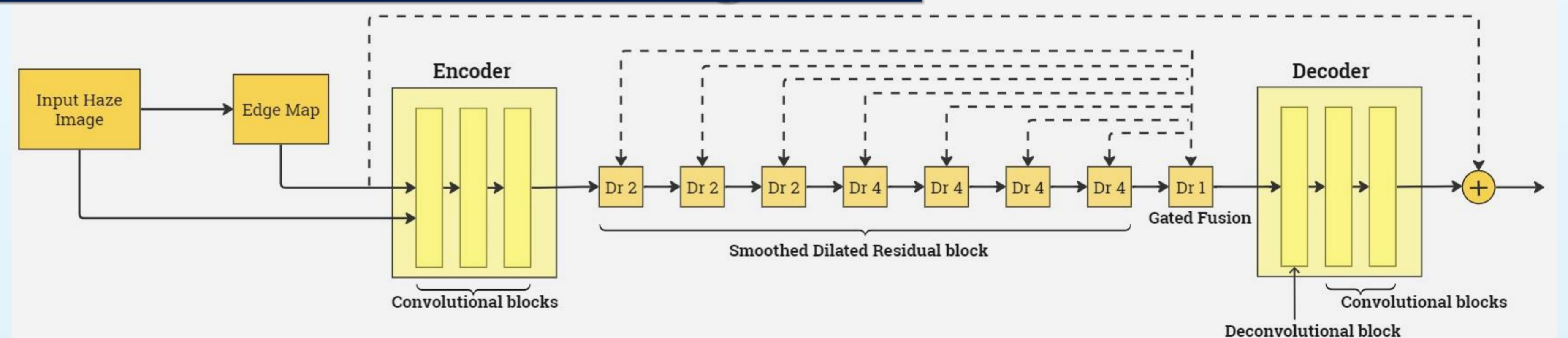
## Introduction

Adverse weather conditions such as heavy rain, dense fog & low light reduce road visibility. Although ADAS have revolutionized automotive safety, the effectiveness of these systems can be compromised by these adverse weather conditions. The project propose a machine learning based approach to remove those weather conditions, in order to enhance visibility of ADAS with the purpose of detecting and recognizing and road & traffic signs effectively.

## 1. Dark Removal Algorithm



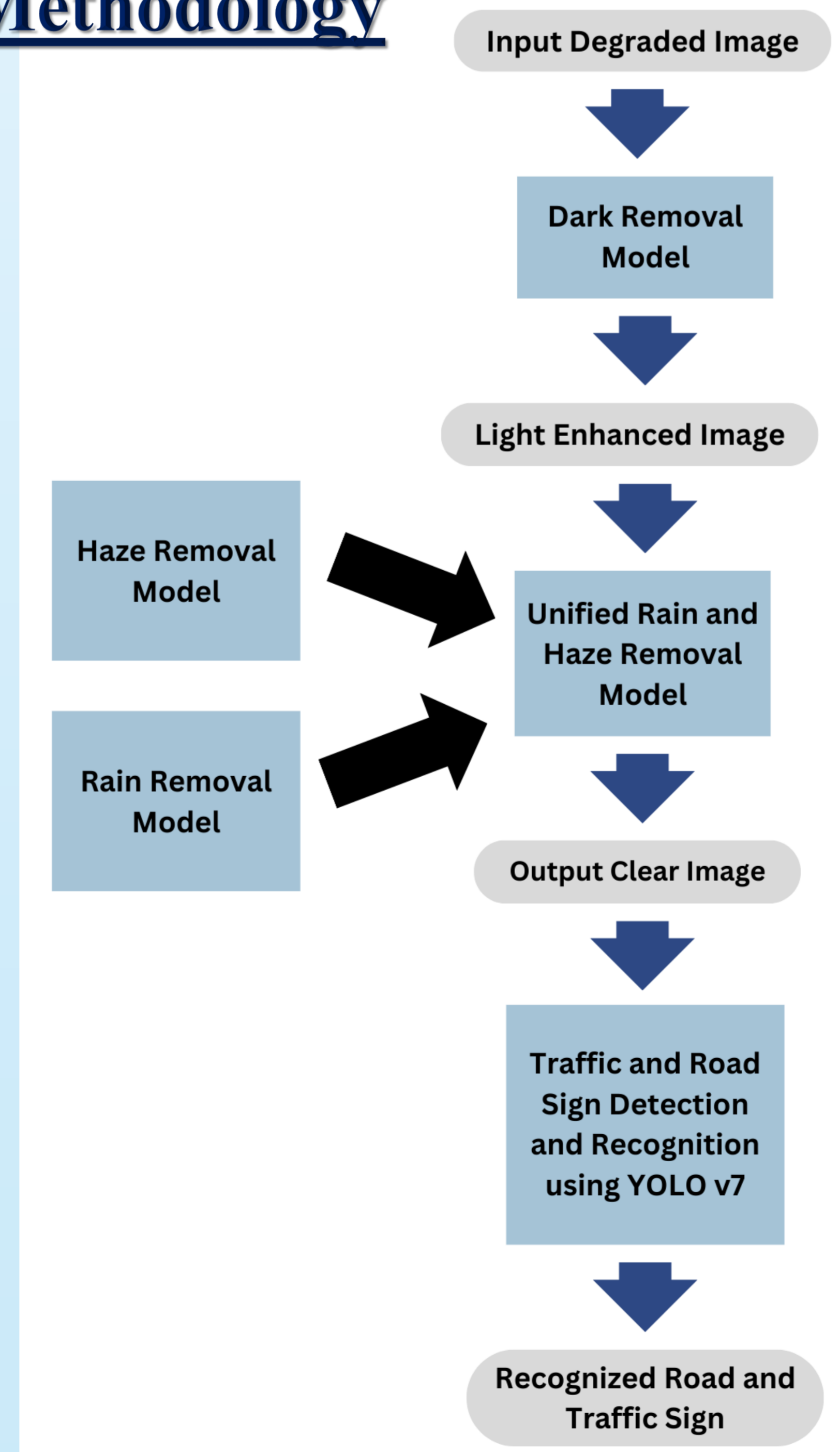
## 2. Haze and Rain Removal Algorithm



## Results



## Methodology



## Conclusion

In conclusion, unified approach for the detection and recognition of traffic and road signs, exhibits robust performance, as indicated by **consistently low BRISQUE values in output images**. Our next goal is to implement the hardware design on Jetson platform, in order to optimize processing power and obtain real time processing capabilities.

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