

**VISIBILITY ENHANCEMENT FOR IMAGES CAPTURED IN DUSTY WEATHER  
VIA TUNED TRI THRESHOLD FUZZY INTENSIFICATION OPERATIONS**

*A Project report submitted in partial fulfilment of the requirements for the award of degree*

*of*

**BACHELOR OF TECHNOLOGY**

**IN**

**ELECTRONICS AND COMMUNICATION ENGINEERING**

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**AVANTHI INSTITUTE OF ENGINEERING & TECHNOLOGY**

**DEPARTMENT OF**

**ELECTRONICS AND COMMUNICATION ENGINEERING**

**( Approved by AICTE and Permanently Affiliated to JNTU-KAKINADA, AP)**

**(An NBA, NAAC Accredited Institution)**

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**VISAKHAPATNAM DISTRICT-531113**

**2017-2021**

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**CERTIFICATE**

This is to certify that the project entitled "**VISIBILITY ENHANCEMENT FOR IMAGES CAPTURED IN DUSTY WEATHER VIA TUNED TRI THRESHOLD FUZZY INTENSIFICATION OPERATIONS**" in partial fulfilment for the of degree of Bachelor of Technology in **ELECTRONICS AND COMMUNICATION ENGINEERING**, at AVANTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY, MAKAVARAPALEM, VISAKHAPATNAM is an bona fide work carried out by B. SWAMI NAIDU(17811A0410), K. HEMANTHI (18815A0405), K. MANOJ NAIDU (17811A0425), A. VAMSI(17811A0406) under the guidance and supervision during 2017-2021.

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**PROJECT GUIDE**

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## **ABSTRACT**

An inclement dusty weather can significantly reduce the visual quality of captured images, which consequently hampers the observation of important image details. Capturing images in such weather often yields undesirable artifacts such as poor contrast, deficient colors or color cast. Hence, various methods have been proposed to process such unwanted events and recover lucid results with acceptable colors. These methods vary from simple to complex due to the variation of the used processing concepts. In this article, an innovative technique that utilizes tuned fuzzy intensification operators is introduced to expeditiously process poor quality images captured in an inclement dusty weather. Intensive experiments were carried out to check the processing ability of the proposed technique, wherein the obtained results exhibited its competence in filtering various degraded images. Specifically, it performed well in providing acceptable colors and unveiling fine details for the processed images.