**PROJECT REPORT**

ON

# FEATURE SELECTION OF IMAGE CLASSIFICATION BASED ON NEW RANKING CRITERION

A Dissertation submitted in partial fulfillment of the

Requirements for the award of the degree of

**BACHELOR OF TECHNOLOGY**

in

**COMPUTER SCIENCE AND ENGINEERING**

*Submitted By*


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Under the esteemed guidance of

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Assistant Professor-CSE



**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

**CVR COLLEGE OF ENGINEERING**

(UGC Autonomous Institution)

Accredited by NBA & NAAC 'A' Grade

(Approved by AICTE & Govt. of Telangana and Affiliated to JNT University, Hyderabad)

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## DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

## CERTIFICATE

This is to certify that the project entitled **"FEATURE SELECTION OF IMAGE CLASSIFICATION BASED ON NEW RANKING CRITERION"** is a bonafide work carried out by **A. AKSHAY KUMAR (15B81A0513), K. ANUSH (15B81A0525)** and **B. HARISH (15B81A0557)** under my guidance and supervision in the partial fulfillment of the requirement for the award of degree of Bachelor of Technology in Computer Science and Engineering to Jawaharlal Nehru Technological University (JNTUH), Hyderabad during the academic year 2018-2019.

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# DECLARATION

We hereby declare that the project entitled "**FEATURE SELECTION OF IMAGE CLASSIFICATION BASED ON NEW RANKING CRITERION**" submitted by us to CVR College of Engineering, in the partial fulfilment of the requirement for the award of degree of Bachelor of Technology in Computer Science and Engineering is a record of bonafide project work carried out by us under the guidance of **Ms. G. Ramya**. We further declare that the work reported in this report have not been submitted to any other university or institution.

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# ABSTRACT

In this paper, a feature selection method combining the relief and SVM-RFE algorithm is proposed. This algorithm integrates the weight vector from the relief into SVM-RFE method. In this method, the relief filters out many noisy features in the first stage. Then the new ranking criterion based on SVM-RFE method is applied to obtain the final feature subset. The SVM classifier is used to evaluate the final image classification accuracy. Experimental results show that our proposed relief- SVM-RFE algorithm can achieve significant improvements for feature selection in image classification.



**Keywords**: Feature Selection, Image Classification, New Ranking Criterion.

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