DEPARTMENT OF AI&ML IV Year B.Tech. -I Sem

Name of Examination: Application Development-Web Explore using Machine

learning

Course Code: MR20-1CS0138

Section: Zeta

Project Status Report

Title Name: Interactive Image Segmentation using Machine Learning Techniques

Title Name Change (if any): "Contours and Colors: The Science of Image Segmentation"

Abstract of the work: Image segmentation, a cornerstone of computer vision, has been revolutionized through the application of machine learning techniques. This abstract provides an encompassing overview of diverse segmentation methodologies within this framework. From region-based techniques like watershed segmentation, which accurately separates overlapping cells in microscopic images, to edge-based methods such as Canny edge detection that enhance object boundaries for pedestrian detection in surveillance, and further to clustering segmentation exemplified by K-means clustering, effectively categorizing land cover types in satellite imagery. The abstract culminates in the prominence of deep learning, embodied by Mask R-CNN, which excels in instance segmentation, enabling precise detection and pixel-level masking of diverse objects in complex scenes.

Student Batch Details: ZT-4

| Roll Number | Student Name | Date | Remarks (will be filled by guide) |
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