RYERSON UNIVERSITY

Faculty of Engineering, Architecture and Science

Department of Electrical and Computer Engineering

Course Number	CPS 843
Course Title	Introduction to Computer Vision
Semester/Year	F2023

Instructor	Dr. Guanghui Richard Wang

Assignment Title	Project Progress Report

Submission Date	November 20th, 2023
Due Date	November 20th, 2023

Student Name	Abdulrehman Khan	Hamza Iqbal
Student ID	500968727	500973673
Signature*	A.K	H.I

**By signing above you attest that you have contributed to this written lab report and confirm that all work you have swung the lab contributed to this lab report is your own work.*

CPS 843 Project Progress Report - Group 96

Group Members:
- Abdulrehman Khan: Implementation, Experimentation, and Documentation
- Hamza Iqbal: Implementation, Experimentation, and Documentation

Project Title: Compressed Image Feature Extraction

Introduction:
We are looking to utilize methods such as machine learning, deep learning, and computer vision applications to help the breakdown of large amounts of image data, for our compressed image feature extraction project. This will help for easier analysis. More specifically, we will be looking into edge detection in compressed images and edge enhancement.

Objectives:
- Implement image compression techniques to reduce storage and transmission costs.
- Explore various edge detection algorithms, with a focus on their applicability to compressed images.
- Investigate feature extraction from compressed images for content-based retrieval.

Experimental Methodology:
We are utilizing methods for image compression including the 'spiht_3D' compression technique within a tree structure. Our experiments on edge detection involve both algorithms like Sobel, Canny, Prewitt and Roberts well as newer approaches based on the Canny operator.

Current Project Status:
As of the deadline, our team has made notable strides. Learning how to perform image compression using 'spiht_3D' successfully, which will showcase promising results on a true-color image. Experiments on edge detection (Sobel, Canny, Prewitt, Roberts) exhibit effective segmentation. Ongoing refinement is in progress for improved compatibility with compressed images.

Timeline:
1. Implementation and experimentation of image compression.
2. Carry out experiments focusing on edge detection algorithms.
3. Commence implementation and experimentation of feature extraction.
4. Fine tune feature extraction and prepare for project submission.

Conclusion:
The progress report highlights our accomplishments in image compression as initial experiments conducted for edge detection. We are doing our best to adhere to our planned timeline. Anticipate completing feature extraction in the weeks.

We look forward to finishing our finalized project on December 16th, 2023.