# J. C. Bose University of Science & Technology,

# Faridabad (Haryana)



# Department of Computer Engineering

# A minor project synopsis on Image

# Captioning

## Bachelor of Technology
## In
## Computer Engineering

## By

## Ankit Bhardwaj
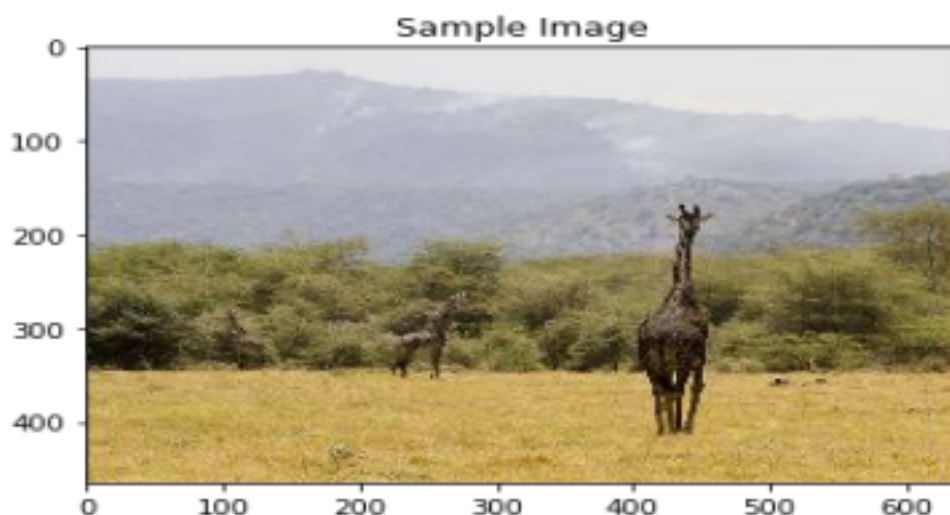
## (18001003018) And

## Chirag (18001003031)

## Under the supervision
## of Mrs. Alka Choudhary
## IMAGE CAPTIONING

**1.Introduction**

**Image Captioning** is the process of generating textual description of an image. It uses both **Natural Language Processing** and **Computer Vision** to generate the captions.



Caption for this image: **A giraffe standing in a field**

## 2. Motivation

**Image captioning** has various **applications** such as recommendations in editing **applications**, usage in virtual assistants, for **image** indexing, for visually impaired persons, for social media, and several other natural language processing **applications.**

We can create a product for the blind which will guide them travelling on the roads without the support of anyone else. We can do this by first converting the scene into text and then the text to voice. Both are now famous applications of Deep Learning.
CCTV cameras are everywhere today, but along with viewing

the world, if we can also generate relevant captions, then we can raise alarms as soon as there is some malicious activity going on somewhere. This could probably help reduce some crime and/or accidents.

# 3.Objectives of the Project

The main objective of the project is to generate the relevant caption describing about the given image using different deep learning algorithms such **as Convolution Neural Networks, Recurrent Neural Networks, Transfer Learning, Gradient Descent Backpropagation, Text Processing, Python syntax and data structures, PyTorch**, etc.

## 4.Tools Required/Platform Used

Python, OpenCV-python, PyTorch , NumPy, Colab notebook

## 5. Brief Profile of the Team

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