**ABSTRACT**

**PREDICTING Rainfall using Cloud Images**

India, primarily an agriculture-based economy, is largely dependent on the monsoon. The agriculture sector is the backbone of the Indian economy and therefore, monsoon should be considered the backbone of agriculture. It has more impact in the financial & social domain. Because of the cost element and Security issues, in modern age it is now possible to use digital image processing techniques to calculate different parameters that are affect the monsoon or affected by monsoon in global environment.

As per research Clouds that produce rain and snow fall into this category. ("Nimbus" comes from the Latin word for "rain.") Two examples are the nimbostratus or cumulonimbus clouds. Nimbostratus clouds bring continuous precipitation that can last for many hours.

The type of rainfall cloud is predicted by analysing the colour and density of the cloud images. The cloud images are stored as JPEG file in the file system. Analysis is done over several images.

Characteristics of cloud such as shape, colour, texture, edges are also used to get status of rainfall. By applying this simple digital image processing techniques, common people can gather information regarding rainfall status by just taking photograph by their digital camera and utilize this technique.

The specifications required in the model are:

Platform : Android/OpenCV

Operating System : Ubuntu/Windows

Software Languages : JAVA