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I

ABSTRACT

As a space enthusiast and a hobbyist exploring the silver river is a thrill ride. A great start to this limitless exploration would be to understand space science. Most of this observation happens with images takes by satellites. Image processing is a key domain in engineering because any information which can be detected by images can be retrieved and observed.

To understand how entire process is done we used octave a free software which helps in understanding of operations which are performed to get the data from a image. Main aim of my internship is to count the number of balloons present in the image. As we know in real time we might have different backgrounds and balloons can be in different points of the frame as to cover all conditioning images we use 51 images dataset.

Creating of antenna designs in order to minimize in size and placing radiation field as air or vacuum. It is a simulation process in which we can analyse the optimum working of antenna in real time. Here we create three designs step by step and analyse parameter that are required.

The advantage of learning in an upcoming satellite ground station like DHRITVAN SPACE LAB is that brainstorming sessions are intense and are always fruitful. The internship was a useful one as it opened up new possibilities to explore this field in a much better way.

II

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