

Mini-Project Proposal on DETECTION OF ICE-BERG USING DEEP LEARNING WITH THE HELP OF SATELLITE IMAGES

ABSTRACT

Climate change is one of the greatest challenges facing humanity, and its effects are increasingly visible. Data on Iceberg and Island is significant for atmosphere science and for different marine activities in the sea. The detection and monitoring of the icy objects in the often dark and cloud covered polar region are done with the well-established tool known as synthetic aperture radar (SAR).

High quality satellite monitoring of dangerous ice formations is critical to navigation safety and economic activity in the regions. The satellite images play a crucial role in the identification of the icebergs. Convolutional neural network (CNN) model is proposed for the iceberg detection from the satellite images. It is based on the satellite dataset for target classification and target identification. The iceberg detection is based on the statistical criteria for finding the satellite images. This model is used to identify automatically whether it is remote sensed target is iceberg or not. Sometimes the iceberg is wrongly classified as ship. This model is done to make accurate about the changes in the detection.

Building an algorithm to automatically identify whether a remotely sensed target is an iceberg or not. Often times an iceberg is wrongly classified as a ship. The algorithm had to be extremely accurate because lives and billions of dollars in energy infrastructure are at stake

1. System Requirements:

Software Requirements:

- Software : Jupyter Notebook
- Programming Language : Python 3.10
- Scripting languages : Python
- Database : Open-Source Data set
- Operating System : Windows 7 and above (using Windows 10)

Hardware Requirements:

- Hard Disk Drive : 1 TB (Required 1 GB)
- Processor : Intel i7 (Required Intel i5)
- RAM : 4GB (min) (using 16 GB)

2. Particular of Students:

Team No: 15				
S. No.	Name	Roll No.	Gender (M/F)	CGPA (Up to previous Semester)
1.	Donthi Venkata Aravind	19091A05H9	M	8.8951
2.	Maram Reddy Anjali	19091A0506	F	7.5494
3.	Surisetty Tejesh	19091A05G5	M	7.1728
4.	Mali Reddy Pavan Sai Reddy	19091A0595	M	4.6049

Project Duration (in months): : 3 Months

4. Work Plan:

- **Project Discussion and literature** : 1 week
- **Review Presentation** : 1 week
- **Designing** : 2 weeks
- **Implementation** : 5 weeks
- **Testing** : 2 weeks
- **Project Completion** : 1 week

5. Declaration by students:

We hereby declare that the project work entitled “**DETECTION OF ICE-BERG USING DEEP LEARNING WITH THE HELP OF SATELLITE IMAGES**”, we shall undertake the project strictly in accordance with the provisions specified in the project proposal with the consultation of the supervisor and we shall submit reports about the progress of the work and final report as per the format of the department of Computer Science & Engineering, RGM CET on completion of the project.

Date: 05/03/2022

(Signature of Students with Roll No.)

Place: Nandyal

19091A05H9 –

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Under the Guidance of:

Dr. M.SRAVAN KUMAR REDDY M.Tech, Ph.D.

Assistant Professor

Computer Science and Engineering

Signature of Guide

(Dr.M SRAVAN KUMAR REDDY)

Signature of Co-ordinator

(Dr.M SRAVAN KUMAR REDDY)

Signature of HOD

(Dr. K. SUBBA REDDY)