**Weather Forecast using Cloud Cover Analysis**

**Group Name- Weather Forecast, Group No: 19**

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# Details about the Dataset:

* 1. We found a dataset of cloud cover images from the dataset present in the paper, **Combining crowd-sourcing and deep learning to explore the meso-scale organization of shallow convection** and
  2. The dataset was downloaded from [URL](https://www.kaggle.com/competitions/understanding_cloud_organization/data) and is found in this [Drive Link](https://drive.google.com/drive/folders/1y_QErbnPV6CDuLED-6i6b-6dzb9lxBQC?usp=share_link).
  3. The dataset is over 5 GB large, containing images and multiple corresponding masks, signifying 4 labels, **Flower, Fish, Gravel,** and **Sugar.**

# Details of the implementation:

1. We use the U-Net segmentation algorithm, used primarily for biomedical segmentation and presented first in the paper, <https://lmb.informatik.uni-freiburg.de/people/ronneber/u-net/>
2. The code has been deployed on Kaggle at: <https://www.kaggle.com/code/anirudh257/cloud-cover-classification-project>
3. **Contribution**

The project work was distributed in this form:

• U-Net neural network design by Anirudh and data preprocessing by Sahil and Niyathi

• Krutika worked on searching the dataset and literature survey.

• Arpit worked on performing evaluations and adding new images.