

DS Pros&Copresent...

OPEN
CLASSIFIER

Challenge Faced by the City

- **Pollution Monitoring and Management:** Urban areas face significant challenges in monitoring and managing environmental pollution.
- **Health and Safety Concerns:** High pollution levels can adversely affect public health and safety, necessitating timely interventions.
- **Tourism:** IslandCity tourism is mainly due to the beautiful coastline and crystal clear water, there is a need for a method to constantly monitor pollution levels



How to solve it?

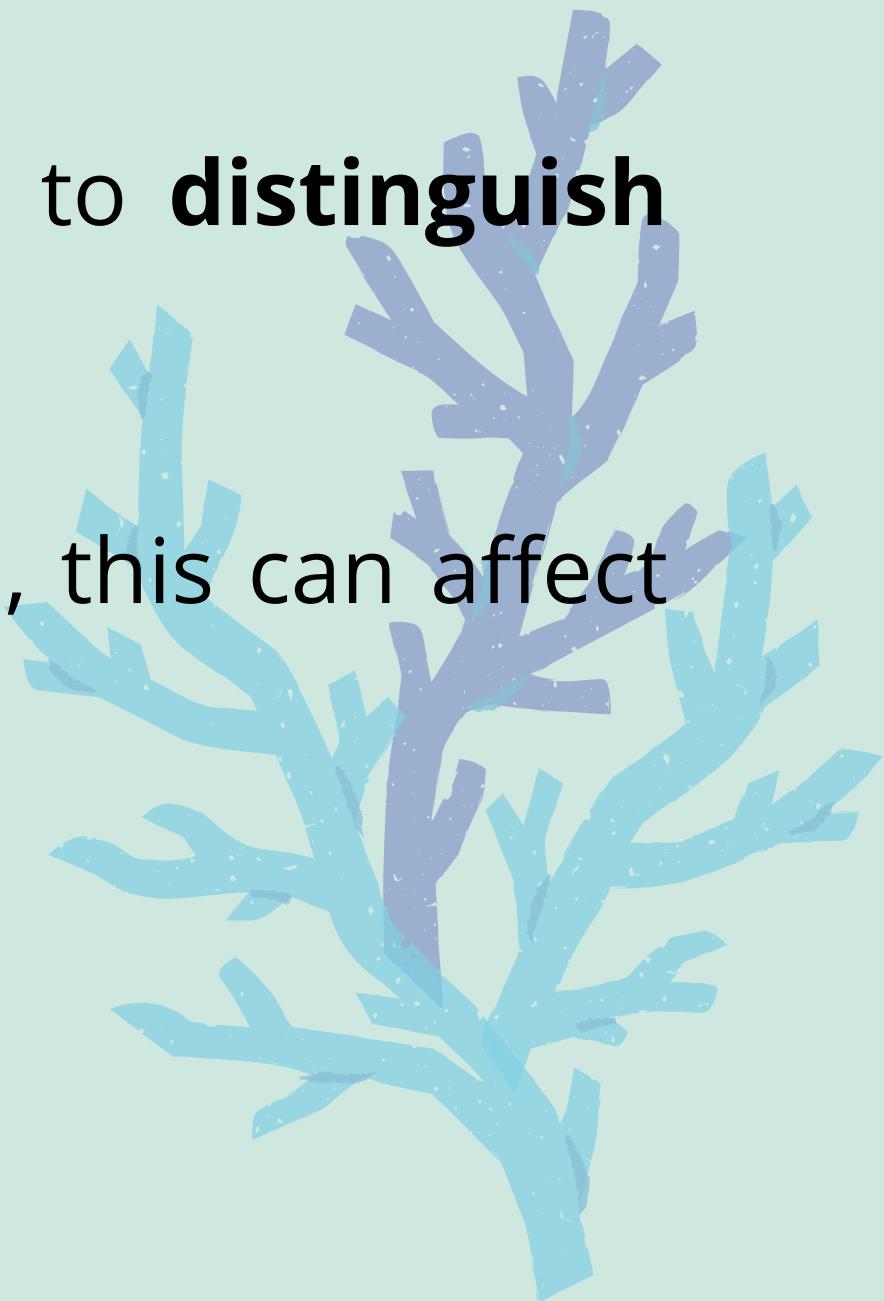
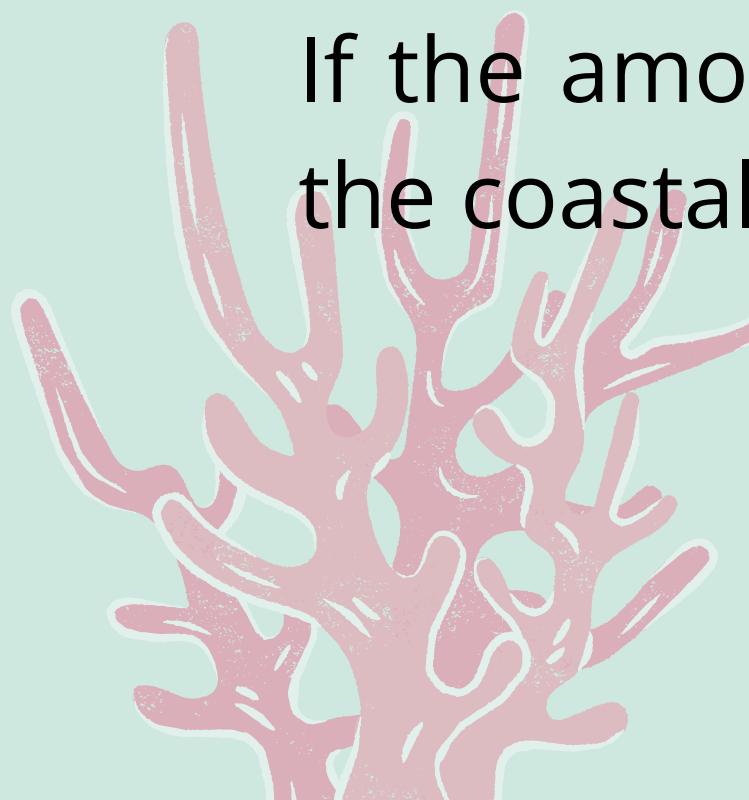


classification algorithm

Corals are **natural biomarkers** that can show information about water quality

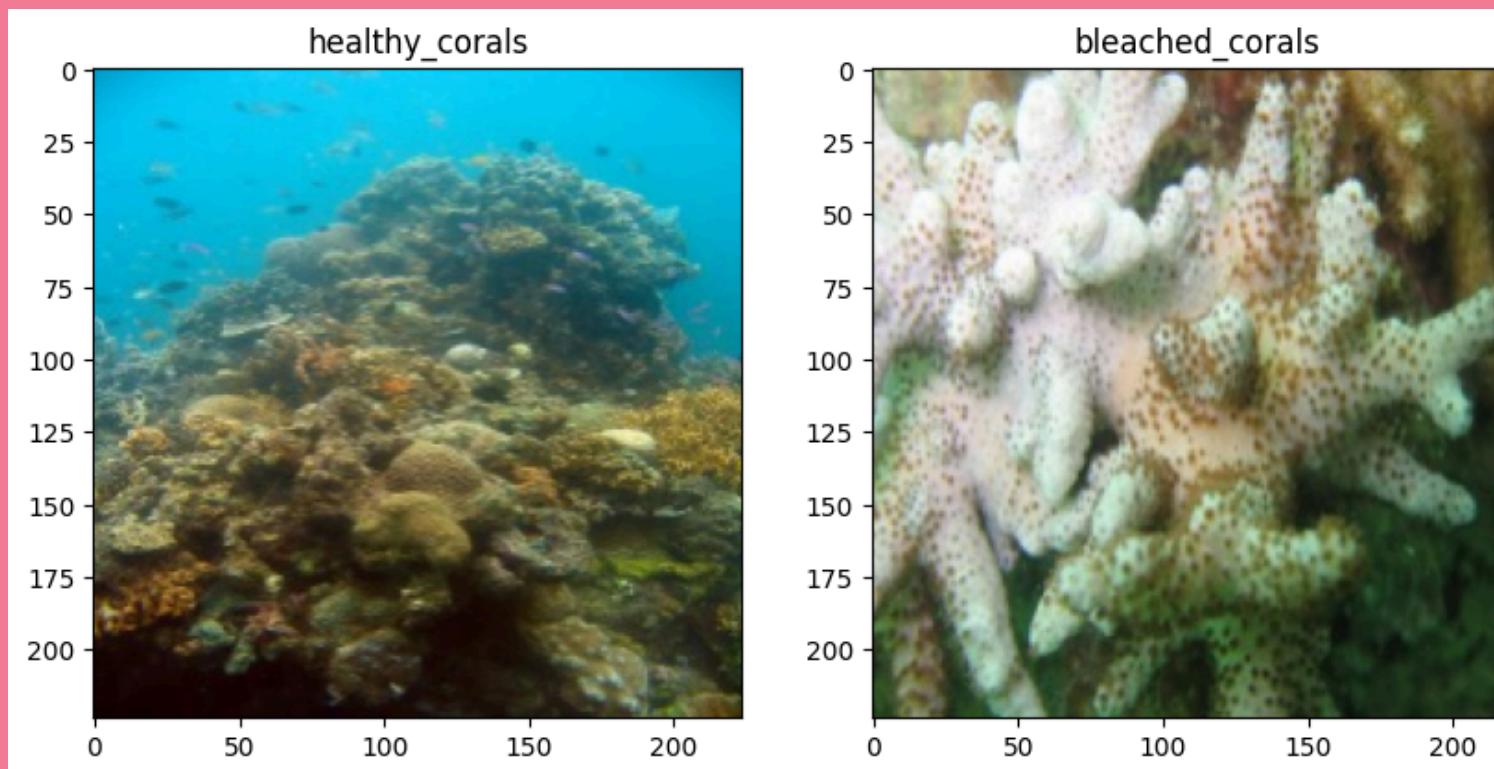
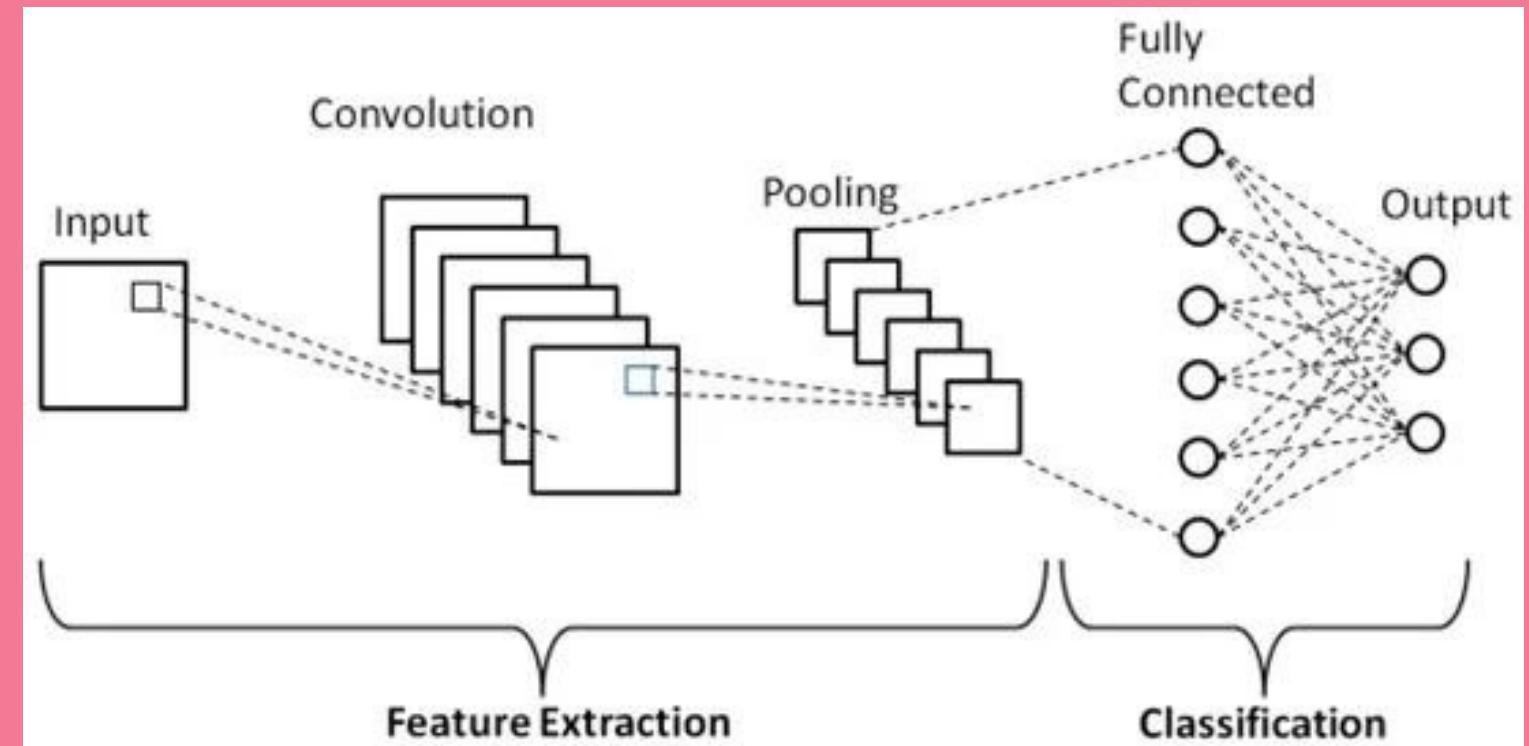
Our team of DS professionals has developed an algorithm to **distinguish between a healthy coral and a bleached one**

If the amount of bleached coral reaches a certain threshold, this can affect the coastal environment



Convolutional Neural Network

This CNN model consists of convolutional and pooling layers to extract features from the input images, followed by fully connected layers to perform the classification.



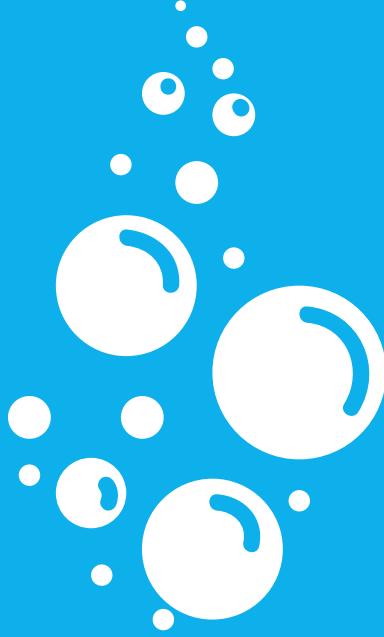
The final layer uses a sigmoid activation function, making it suitable for binary classification of the corals (if healthy or bleached)

With this trained model it's possible to make an environmental analysis and understand the general situation of the water of Island City

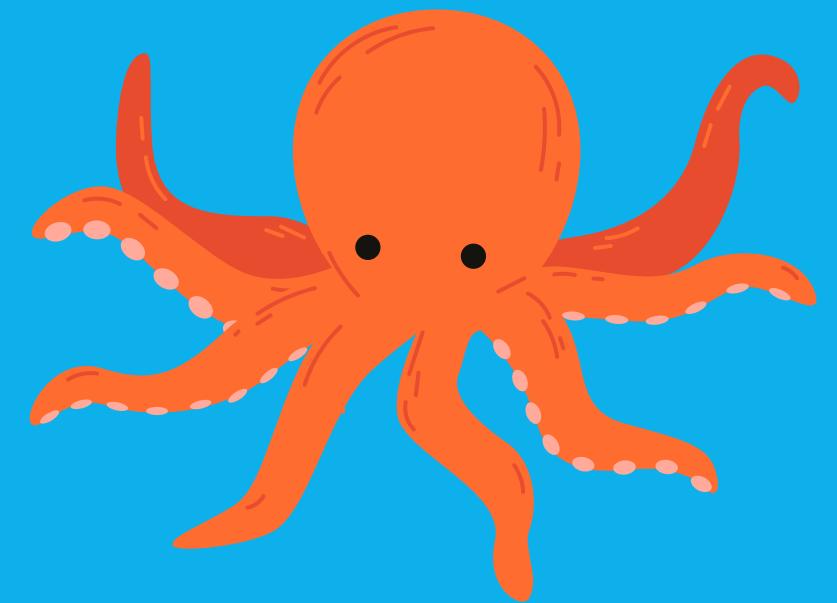
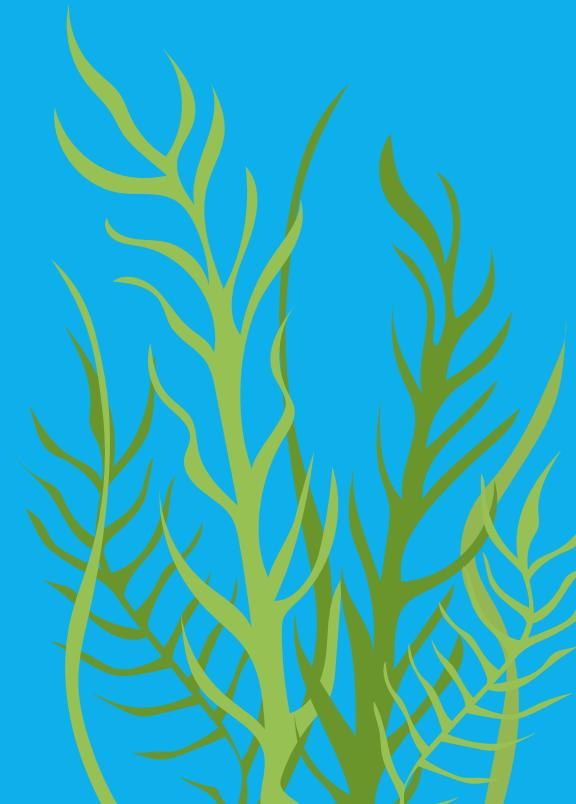


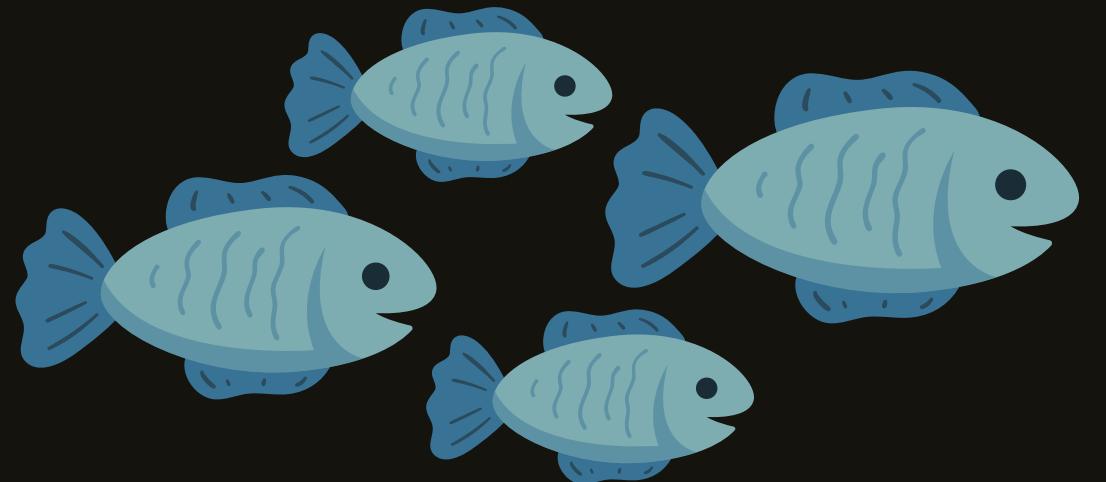
With just some photos of the famous coral reef of IslandCity we can monitor the water pollution!





**LET'S SAVE THE ISLANDCITY
ENVIRONMENT**





THANKS FOR
THE ATTENTION

DS Pros Head of Engineering
Francesco D'Aleo

