An inspiration : “Help Protect the Great Barrier Reef with Tensor Flow on Kaggle” - w.r.t Images + Image Processing R&D Algorithms by using Python & ImageAI & Ising Models -> A Suggestion for a TOUGH Science & Technology Challenge in the Context of Probing Environmental Systems.

[Understanding - implementation of the underwater image enhancement network (Water-Net) - TensorFlow-Water-Net]

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[I] Main Idea + Inspiration + Introduction :

Addressing - “THE GREAT BARRIER REEF CHALLENGE” w.r.t Python & AI .

[Source -> https://www.kaggle.com/c/tensorflow-great-barrier-reef]

[II] R&D Informatics Framework Using Python & AI Software Tools :

Start -> Take a Look @ Tensor Flow Waternet for an understanding FIRST.

Apply ImageAI to process the images to TEST Images Processing & Detection of Species of interest using the DATA set. Stop

then take a look @ the competition + its requirements :

[a] https://www.kaggle.com/c/tensorflow-great-barrier-reef/data

[b] https://www.kaggle.com/soumya9977/learning-to-sea-underwater-img-enhancement-eda

[c] https://arxiv.org/abs/2111.14311

Our Simple Algorithm I :

{ Our Suggested Simple Algorithm :: -> LLVM + Python + ImageAI + Ising Models -> to Probe the Images for COTS - Crown-of-Thorns Starfish & Design of related Novel Environmental Informatics System Framework for Future Environmental Adventures }

There could be other interesting & promising ideas - we are mentioning just one aspect.

[III] Important & Useful References :

[a] https://github.com/tejdnk-2019-ShortNotes -> Plenty of Examples -> Look for Image Processing & Related Technologies.

[b] https://www.tensorflow.org/api_docs/python/tf/image

[c] https://li-chongyi.github.io/proj_benchmark.html

[d] https://rajeshrinet.github.io/blog/2014/ising-model/

[e] http://imageai.org/ -> ImageAI -> Very much useful AI based Tool.

[f] https://github.com/ayoolaolafenwa/PixelLib

[IV] Acknowledgment/s :

Sincere Thanks to all WHO made this happen in my LIFE.Non-Profit R&D.Inspire others always.

[V] Conclusion/s with Future Perspectives :

A pioneering R&D Effort w.r.t Environmental Sciences.Testing in Progress @ the TIME of Submission.

We are just providing some feasible solutions to help the society based on our experiences from our previous similar projects.

The information provided here is to inspire others taking part in the competition.

We are trying to Test our Algorithms using : AI + Rust ,Ruby, Java & Dr.Racket etc....Keep Hacking till you get the best answer.

[THE END]