

## ***Interactive comment on “Multi-objective entropy evolutionary algorithm for marine oil spill detection using cosmo-skymed satellite data” by M. Marghany***

### **Anonymous Referee #2**

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After reading the paper couple of times, I have got the impression that the main contribution prototyped in this manuscript is the utilization of E-MMGA model for oil spill detection.

The objective of the manuscript is interesting for the readers of Ocean Science but I think the contribution of the presented manuscript is very low!

As the author clearly mentioned, the topic of oil spill detection using RS data is a very well treated field. Accordingly, I suggest the authors to conduct more in-depth literature review (a comprehensive introduction), and explicitly describe the difference(s) between the published methods in the literature and that being presented in the paper.

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Page 1267 line 7: The author has claimed that “The novelty of this work is designing optimization tool for the real time oil spill automatic detection using Entropy-Based Multi-objective Evolutionary Algorithm without involving NN or any image processing classification tools” but he has not provided any information regarding the real time implementation parameters like speed of the model or overall accuracy of the model for a reasonable dataset (not just one image).

The result and discussion section is not convincing and it needs to be improved substantially. In fact it is not correct to discuss about the performance of a model in this filed just with several samples, on the other hand the comparison part of the study (with different state of the art models like NN or SVM) is missing.

Page 1264 line 19: “Synthetic aperture radar (SAR)” should be “Synthetic Aperture Radar (SAR)” throughout the manuscript you should use SAR.

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