SmallSEOTools

PLAGIARISM SCAN REPORT

Words	318	Date	May 13,2021
Characters	2148	Excluded URL	

0%	100%	0	21
Plagiarism	Unique	Plagiarized Sentences	Unique Sentences

Content Checked For Plagiarism

No Free Lunch Theorem
(in Machine Learning)
By Remi Oni
Thank you!
My understanding of this theorem so far is that there is no all-doing or multipurpose algorithm no where. I have found that every algorithm will have equal performance as the other in any problem or test case.
I have also found that in practice, the “No Free Lunch Theorem” comes into play when you want to choose the best model/algorithm to solve your problem. Even without much technicality, it is quite obvious that the algorithm will usually not have any idea what your data looks like or what your data really is and then doesn’t even know whether it can really satisfactorily solve this particular problem in this instance. Hence it is unwise to consider an algorithm as the best on the go.
In the light of this, it is even now important to have substantial knowledge about your data/problem before deciding which model/algorithm to employ. Now even when you have a good understanding of your data/problem, it is advisable to painstakingly run every model/algorithm on your data. This is because, the results of their (the algorithms) performances will tell you which algorithm works best for that problem at that particular time with those particular specifications.
Short Illustration:
Take for instance there are two experts in different fields (say a neurologist and a dentist). The “No Free Lunch Theorem” is saying with the right conditions and/or probably the worst specifications, both experts on the average will perform the same in both fields.
In summary “No Free Lunch Theorem” is emphatic about these three things:
• Algorithms can be generic in their applications.
• All algorithms for machine learning will equally perform well with the right specifications when passing in the data.
• Just like the illustration above, every algorithm (dentist or neurologist) has a data (tooth-related or brain-related) it will best perform with over the another.

Sources	Similarity