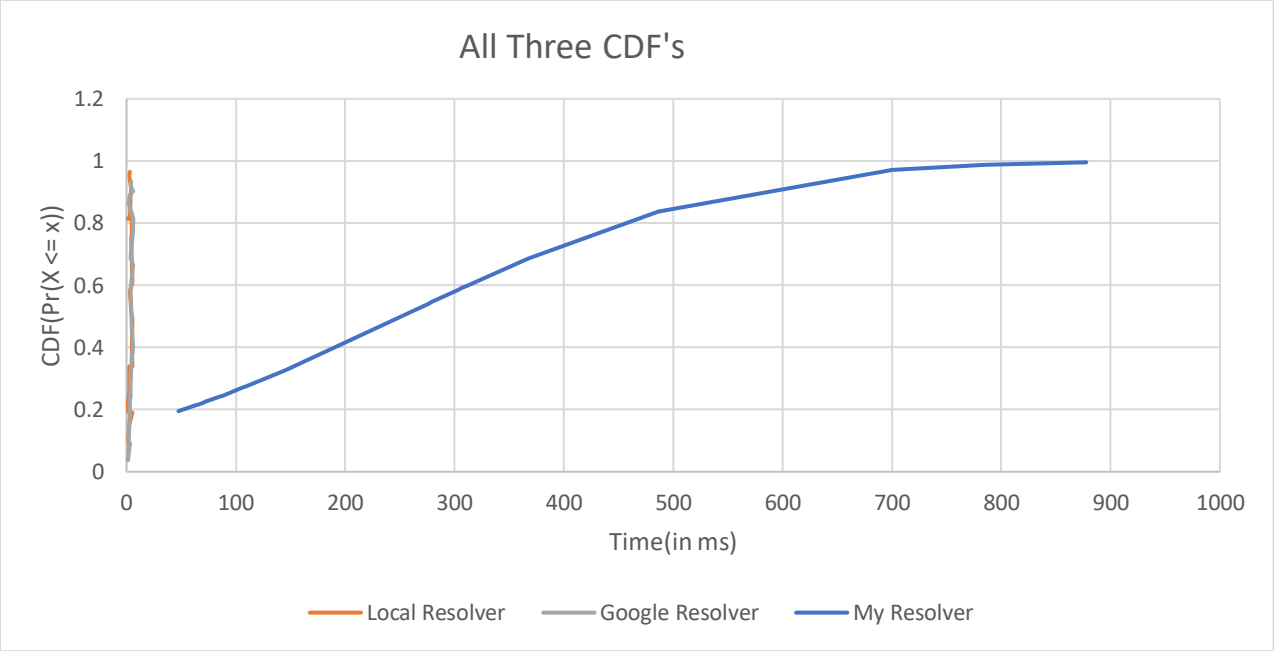
Part-C Implementation

Avg Resolving times (average for 10) for 3 different Resolvers with randomly picked 25 sites from the top 50

Website	My Resolver(ms)	Local Resolver(ms)	Google Resolver(ms)
Google.com	62.3	1.7	1.3
Youtube.com	61.2	1.9	2.7
Amazon.com	109.6	1.5	2.2
Yahoo.com	87.7	2	2.1
Facebook.com	47.5	2.5	2.4
Zoom.us	145.4	2.2	2.9
Reddit.com	85.5	2.9	3.1
Bing.com	69.9	1.1	3.8
Office.com	63	2.7	3.5
Tmall.com	122.7	2.5	4.7
Baidu.com	276.5	3.3	5.3
Qq.com	306	4.8	6.1
Sohu.com	279.3	5.2	4.6
Taobao.com	135.1	4.2	5.1
Wikipedia.org	106.3	3.1	3.5
360.cn	785 .6	5.4	5.9
Weibo.com	365.2	4.2	3.8
Sina.com.cn	486.6	4	5.9
Xinhuanet.com	877.7	4.6	6.2
Netflix.com	72	1.3	1.8
Google.com.hk	366.7	3.4	2.9
Alipay.com	311.5	3.9	5.8
Csdn.net	700.3	4.2	5.6
Myshopify.com	67	1.4	3.6
Amazon.co.jp	304.1	3	4.3

CDF function for all three resolvers.



Observation:

1. My resolver does not have Caching and I think it is one of the most important concepts for DNS resolver. And this is one of the major Issue as to why resolving time is more in my resolver than Google DNS or Local DNS.
2. Google DNS resolving times are a bit more than the Local DNS resolver, this can be primarily due to the fact that the RTT is a bit more for Google Resolver and also another reason could be with the cache expiry, given the number of hits that Google resolver takes, it possibly cannot cache all the information, so there is a possibility that cache expires faster than the local resolver.
3. And, Finally the Local resolver is really fast due to the fact that the RTT is very low and because we are considering averages, as soon as it resolves, it maintains the cache for subsequent queries combined with low RTT, I think the local resolver is a bit more efficient than the google resolver as per the data.