

Table 1

The results of computing the value of CTPH and the editorial distance between hashes of the obfuscated and compile source code of athena software

File number in the dataset	athena file hash values (20 byte)	athena file hash values (40 byte)	Editorial distance	Percentage of malware samples calculated using scdeep	Percentage of malware samples computed using convolutional neural networks			Percentage of malware samples computed using capsular neural network		
					Training epoch			Training epoch		
					I	II	III	I	II	III
1.	a9ae58a87140f9dd969c905df68d9dd4f6cf4400	ef7fafa0af86dd06e11d400dc97a69d0c1d40cad	34	37	39	42	41	34	35	32
2.	e1077e747c9486dce1afda8d0c078fef00a901fa	081cdfaf6f1a00fa5a5dfa678a5daf5c0eadcadf	36	39	42	46	42	30	30	31
3.	d86c9caf861effdfcf76fc556594f551f89edd6	7d8405d6dfcecaaa084eef91aed9c5dcd94855d5	34	34	42	44	43	32	34	35
4.	ad7dfda18edc004d5181a57e48a757acded94444	78fe95d0ad5faca4f815ddfc09dd7d67ef59c5f6	35	28	35	37	34	27	29	28
5.	8aa1dfd67a46f95fc7fa4154a1ad61a8e0d49fd8	ad5dff1e58d956d7a51e9f4acf76fd9f05df1dc	30	29	30	34	31	30	28	29
6.	dc990c540fc50deaf0cdc178101aa107acaef9fe	fd9a969ed8f8ecc7ce57c54cf9de5ffcf0d6a8e	35	34	37	42	46	29	31	32
7.	a1f7dffdd08fcdd6f985c0494a9cef75f0f4ac6d	f7fd9edf4ac6ead485ad5e7c1a9f9f1fff0fddaa	31	34	42	44	41	34	35	32
8.	9efa06fa6567ae9554da5cf51daf9c9c084f06e0	f7fd9edf4ac6ead485ad5e7c1a9f9f1fff0fddaa	30	29	30	34	32	30	32	33
9.	4f5ec656d8ddade66da408854a41caea98c0f44f	f5cd09a85a44df10fad1ea9c4d0dc564fca19191	34	38	42	41	43	40	38	37
10.	5fd9a04af48f68967844f4d145f56f001ad4aa89	f7a56efa4acaef54d0994c0d78641d5e5ff5aaaf	34	42	49	52	50	42	40	41
11.	95a56dfdf7c8550afa8aad474916aa6fe58aa15	f7a56efa4acaef54d0994c0d78641d5e5ff5aaaf	30	49	55	52	53	48	48	44
12.	aececa9dcccdd9fd5dd9c0559ad6dafa84aff74ad	51168e0cdad45f61cf058f4a7d1cd4aaa48098ae	34	52	55	56	51	48	49	52
13.	14791ec8ec19ca5f4f67c54f008a84f9eea89f09	497a16d6dd757f05fa884994c71aea880e87ad18	35	57	62	60	61	55	55	54
14.	dafa0a8c0ad8ea8aade6f06f9e8589ee1cf10af9	c6ca0e98e0a66c458f8fad54aec47455f850aa91	33	38	38	36	35	30	31	32
15.	c91e176518a7e4d450edcd8d45aff1a1af178d40	7ad0cc0f4aa8c767fac7f0a4f7ec19dafa60ec9e	36	14	19	20	22	15	16	14
16.	04a66940a08ac7ada0cdf19f8da8169d0cd56c09	5da88a7dcdcf90ff9871eae5af8dda617d7fa0a	35	29	34	36	37	30	32	33
17.	67a4ad69af60a994d7769e4a40dd0c8a59cd19a0	fa9d6a049a1d9d7d1d6ad07f1a1a87fd6a5ef55a	33	38	42	43	44	32	33	30
18.	cdcdacddde871ecef1da0cac8caf4559eeca084	817c64fed505fde58ddd1a881dc65fe10ad50ad0	34	35	42	45	42	30	35	34
19.	4d0dfc70a1f01ec50a1f64ca5d5de6df18d5787d	f8ac177d7949d8f4f56f1cce4f91d0599f41e95d	35	34	42	43	45	34	35	36
20.	d0a5c475ffca97d7df90895ea1ffed769506fe54	818a59add9456d488f6864d46c146d9d9f0d8ad	35	43	46	49	48	40	41	42