

Table 1

The results of computing the value of mean shift between hashes of the obfuscated and source code malware

File number in the dataset	Source code hash values	Obfuscated source code hash values	Percentage of malware samples computed using only convolutional neural networks			Percentage of malware samples computed using mean shift method in convolutional neural networks		
			Training epoch			Training epoch		
			I	II	III	I	II	III
1.	96c9c7758c9ee5dce6e9c dcc6d9ce8de9ccc555e	cccb9e6c983e95dc793dc c69bc8e6cb8dc95c53c	38	34	35	58	61	67
2.	7d7dc63d9dcc8c37966c c39cedcbec885ce567c	c85e878c93cccce8399c 5b9ecd9cc8ccc8d96e	34	35	35	55	58	58
3.	bc89ce9d7cb33d5cd888c 97c3d7c797cccc5cb9	93c967e9ec5b9ccececc 7cce68c5c36bdcd5b5c	42	45	41	61	64	65
4.	7683e9c97cdce8bc6dece c6c8c6c76dc3cce65e9	998e393939dc953ce6b9 7c5ce6ecce5b63dc5cc3	34	35	34	42	46	45
5.	8973c9ccbdecccce9dc5 b9ccdcec5ccb557c635	8eece9b399ce3d955c7ec ccee9c9b7ce953c598	42	41	41	55	58	57
6.	ebcce6869dbce55dcb7e7 dcd7ec75963ccc5c3c	ecce9cc5cc9ccc6ccc3e98 c5bdecc55eec97757c	39	34	35	46	48	47
7.	3ce3c6c58ec35bcececc7 97eb98cd9696eede	5e5cccc777977e3cec96 bce5c59c5cc8bcb5d36	35	34	38	46	48	47
8.	c5cccc736ce7ee988bedec cc6937b57d39ecc9c9	3cc5ccddc9c56cc9ccc5c 668bec63dc79c598e9c	34	35	34	55	54	56
9.	3c5b657c78ce85ec9ccc7 e6ec3cc68d68e53dc68	cece65cc9b79cd379c3bb 73c8d567ce9389c58ce	31	36	38	52	54	57
10.	6cbe53ce756ccbebcced3 cce3c9e55cccce75c9c	598c9c9b9cc9ce8decc8 3ccc7899ec93c9ecc9c	42	41	45	55	54	59
11.	db8d8cebb3bbccbdb96e5 cccec5ccb98dcc88ebe	cc3bccdccc553e9ece66 8ce35c5cececccdd5cb	37	38	34	56	54	57
12.	d5ede9d8ebc8cec36ecc6 cec8cde9399cc9e8e9c	5597cd99cc3bc3cdc579 bcc7b39ccc3e598c993d	35	34	39	58	57	59
13.	c89ecbc99cccdee6ebcc7 99b55c59cc88ecc6cb	39ecc9bcedeebeec33 6cc5e969e9cedee96e8	32	34	38	58	57	59
14.	6878e87ccc5dccc78cee 63e7b6ce9c3cb9ccbc	cce7cccce9c7d5337cc78 6b35d6e3ccc55d8c9b	34	35	38	61	64	63
15.	b7bce9ce76cdb8ec9c933 eec9ccce8b779cdc8ec	5ccbcccce998ecd6e878 cbd3e693c793e85e566	34	36	35	59	54	57
16.	7cc5bc9873dc8cc9ec789 ccbe5877bec735cccc	95bec7c639be8c9e6639 699b9798ce6eed3dcce	31	34	32	59	57	58
17.	9c366c3cc3c758ebc68de 88cee93d76c9993ce5d	e88c88cc357eb89ed5de d987ec5ec98c79bc6c89	42	41	40	58	54	59
18.	933cc9569e9bc7e69cbd8 eb99e9369cccce9b6cb	ccd8cc7e9cc378cd63b3c ccc6bc7c8cdce3c5ec3	34	38	37	59	57	58
19.	9cccc9cb76e58733c8ce3 96cd9cdc7ce3c9ce6b3	ddcccc87cc5c5cecccdb 89c5c9c9de6cec5cbc3	31	30	32	59	57	58
20.	c65cd88b5e7ccce5cccc8c c9c3eb3bdb98b7eb95	9e6cccc3bde8d7dc5dce d3ce66bc773c9c3c6ce	32	34	35	61	62	60