

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.	f9f558f87750f9cc969c905ad68c9cc5f6ad5500	5f7fff50ff86cc06577c500cc97f69c0c7c50adc	38	39	37	30	31	32
2.	554775757c9586cc57ffad8c0c078f5f00f907ff	087cadff6f7f00ff5f5cff678f5adf5c05fcadad	44	46	49	32	30	31
3.	c86c9adf8675fffcad7f6fc556595f557f895cc6	7c8505c6adc5adff08555f97f5c9c5ccc95855c5	38	41	45	30	32	33
4.	fc7adad785cc005c5787f57558f757fcc5c95555	78f595c0fc5ffad5f875cad09cc7c675f59c5f6	42	45	46	30	33	35
5.	8ff7adc67f56f95fc7ff5755f7fc67f850c59fc8	fc5adfc7558c956c7f5759f5fad76fc9f05ad7cc	37	39	35	23	24	26
6.	cc990c550fc50c5ff0cc778547ff547fad5f9f5	fadf9695c8f85cc7c557c55ad9c55ffad0c6f85	31	32	33	27	28	26
7.	f7f7adfcc08fccc6f985c0595f9c5f75f0f5fc6c	f7fc95ad5fc65fc585fc557c7f9f9f7fff0fcadf	44	49	48	30	31	32
8.	95ff06ff6567f59555ad5ad57adf9c9c085f0650	f7fc95ad5fc65fc585fc557c7f9f9f7fff0fcadf	46	48	49	30	31	35
9.	5f55c656c8adc566ad508855f7ad5f98c0f55f	f5cc09f85f55ad54ffc75f9c5c0cc565fad79797	49	51	52	30	35	34
10.	5fc9f05ff58f68967855f5c755f56f007fc5ff89	f7f65ff5fad5f55c0995c0c78657c555ff5f57f	39	38	41	30	34	35
11.	95f56adadc7c8550fff8ffe575976ff6f558ff75	f7f65ff5fad5f55c0995c0c78657c555ff5ffff	42	46	44	30	32	31
12.	f5c5ad9cccc9fc5cc9c0559fc6adff85fff75fc	5776850cadf55f67ad058f5f7c7cc5fff58098f5	48	45	46	32	34	35
13.	757975c85c79ad5f5f67c55f008f85f955f89f09	597f76c6cc757f05ff885995c77f5f880587fc78	49	51	56	30	32	34
14.	58980f8c0fc85f855c56f06f958589557ad54ff9	c6ad059850f66c558f8f5f55f5c57555f850ff97	39	38	37	46	48	49
15.	c975776578f755c5505cc8c55fff7f7ff778c50	7fc0cc0f5ff8c767ffc7f0f5f75c79adff605c95	46	45	43	35	32	33
16.	05f66950f08fc7fad0ccf79f8ad8769c0cc56c09	5ad88f7cccad590ff98775f55ff8cad677c7ff0f	49	48	46	30	34	36
17.	67f5fc69ff60f995c776955f50cc0c8f59cc79f0	ff9c6f059f7c9c7c7c6fc07f7f7f87fc6f55f55f	49	55	58	44	42	40
18.	f46adf02558775c5f7ad0adc8adf555955adf085	877c65f5c505fc558ccc7f887cc65f554fc50fc0	56	61	61	44	45	43
19.	5c0adc54f7f075c50f7f65ad5c5c56ad78c5787c	f8fc777c7959c8f5f56f7cc55f97c0599f57595c	38	39	33	27	29	28
20.	c0f5c575ffad97c7ad908955f7ff5c769506f555	878f59fccc9556c588f6865c56c756c9c9f0c8fc	42	46	48	35	34	36