Prediction	True Category											
	SSH-Patator	FTP-Patator	DDoS	DoS GoldenEye	Heartbleed	DoS slowloris	BENIGN	DoS Slowhttptest	Bot	PortScan	DoS Hulk	Infiltration
Heartbleed	0	0	0	0	0	0	0	0	0	0	0	0
DoS slowloris	0	0	0	0	0	1562	0	6	0	0	0	0
FTP-Patator	0	2368	0	0	0	0	0	0	0	0	0	0
Web Attack - XSS	0	0	0	0	0	0	13	0	0	0	0	2
DoS Slowhttptest	0	0	0	1	0	39	0	1529	0	0	0	0
Infiltration	0	0	0	0	0	0	0	0	0	0	0	0
Bot	0	0	0	0	0	0	0	0	517	0	0	0
Web Attack - Brute Force	0	0	0	0	0	0	31	1	0	2	1	0
BENIGN	22	11	12	30	6	132	8994	90	35	13	9	8
PortScan	0	0	0	0	0	0	0	0	0	8946	0	0
SSH-Patator	1729	2	0	0	0	0	11	0	0	0	0	0
DDoS	0	0	8904	0	0	0	0	0	0	0	0	0
DoS Hulk	0	0	0	0	0	1	8	0	0	12	9051	0
Web Attack - Sql Injection	0	0	0	0	0	0	0	0	0	0	0	0
DoS GoldenEye	0	0	0	3126	0	0	5	2	0	0	0	0

Table 1: Confusion matrix of the final run on CIC-IDS2017

Prediction	True Category																						
	back	loadmodule	portsweep	neptune	warezmaster	phf	rootkit	perl	smurf	nmap	multihop	guess_passwd	ftp_write	warezclient	ipsweep	teardrop	pod	land	satan	normal	imap	spy	buffer_overflow
back	172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
loadmodule	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
portsweep	0	0	172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
neptune	0	0	0	172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
warezmaster	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
phf	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
rootkit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
perl	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
smurf	0	0	0	0	0	0	0	0	172	0	0	0	0	0	0	0	0	0	0	0	0	0	0
nmap	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
multihop	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
guess_passwd	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ftp_write	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
warezclient	0	0	0	0	0	0	0	0	0	0	0	0	0	173	0	0	0	0	0	2	0	0	0
ipsweep	0	0	0	0	0	0	0	0	0	0	0	0	0	0	171	0	0	0	0	2	0	0	0
teardrop	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	173	0	0	0	0	0	0	0
pod	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
land	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
satan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	169	0	0	0	0
normal	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	168	0	0	0
imap	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
spy	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
buffer_overflow	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 2: Confusion matrix of the final run of KDD99

Prediction	True Category																				
	teardrop	normal	back	land	guess_passwd	satan	phf	ftp_write	multihop	loadmodule	smurf	neptune	portsweep	ipsweep	perl	imap	pod	warezmaster	buffer_overflow	rootkit	nmap
teardrop	8	36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
normal	3	9446	53	0	1231	4	2	3	17	2	67	1	4	3	2	1	5	838	20	12	0
back	0	0	306	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
land	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
guess_passwd	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
satan	1	144	0	0	0	720	0	0	0	0	0	6	0	0	0	0	1	0	0	0	0
phf	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ftp_write	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
multihop	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
loadmodule	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
smurf	0	9	0	0	0	0	0	0	1	0	598	0	0	0	0	0	0	0	0	0	0
neptune	0	2	0	4	0	10	0	0	0	0	0	4646	0	0	0	0	0	0	0	0	59
portsweep	0	56	0	0	0	1	0	0	0	0	0	4	153	0	0	0	0	0	0	0	0
ipsweep	0	17	0	3	0	0	0	0	0	0	0	0	0	138	0	0	28	86	0	1	1
perl	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
imap	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
pod	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0
warezmaster	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
buffer_overflow	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
rootkit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
nmap	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	13

Table 3: Confusion matrix from the final run of NSL-KDD

Prediction	True category				
	DDoS	Reconnaissance	DoS	Theft	Normal
DDoS	3628	0	0	0	0
Reconnaissance	0	3581	0	0	0
DoS	0	0	3593	1	0
Theft	0	0	0	25	0
Normal	0	0	0	1	138

Table 4: Confusion Matrix for the final run of UNSW Bot-IoT

Prediction	True category													
	Backdoor	Reconnaissance	Exploits	Worms	Reconnaissance	Analysis	DoS	Shellcode	Fuzzers	Generic	Normal	Backdoors	Fuzzers	Shellcode
Backdoor	2	0	0	0	0	0	0	0	0	0	0	0	0	0
Reconnaissance	13	2916	32	18	0	0	79	0	33	1	0	0	0	3
Exploits	14	78	2247	9	83	32	270	18	10	146	2	15	28	13
Worms	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Reconnaissance	0	0	11	0	425	0	3	9	0	2	0	0	1	0
Analysis	58	78	259	0	0	369	156	0	8	1	0	120	280	0
DoS	435	557	730	13	5	440	2954	0	344	80	0	12	39	1
Shellcode	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fuzzers	6	4	79	2	0	0	79	0	3187	10	0	0	0	31
Generic	0	1	15	0	2	0	26	15	0	3394	0	0	1	0
Normal	0	0	0	0	0	0	0	0	0	0	3505	0	0	0
Backdoors	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fuzzers	0	0	82	1	20	1	31	22	0	33	48	4	1189	0
Shellcode	6	3	11	3	0	0	32	0	0	0	0	0	0	356

Table 5: Confusion matrix for the final run of UNSW-NB15