Table A1. Sensors and Actuators in the SWaT Dataset

Stage	Sensor	Actuator
1	LIT101, FIT101	MV101, P101
2	AIT202	MV201
3	LIT301, FIT301, DPIT301	MV201, MV302, P301
4	LIT401, FIT401	P401
5	FIT501, FIT502, AIT501	MV501, P501
6	-	-

Table A2. Attack Description of the SWaT Dataset

Attack	Description
1	MV-101 is open while it should be closed
2	P-102 is turned ON while it should be OFF
3	LIT-101 reading is increased 1 mm per second
4	MV-504 is open while it should be closed
5	AIT-202 reading is reduced below nominal value
6	LIT-301 reading is increased above max limit
7	DPIT-301 reading is increased above nominal value
8, 9	FIT-401 reading is reduced below nominal value
10	MV-304 is closed while it should be open
11	MV-303 is stuck at the closed position
12	LIT-301 reading is decreased by 1 mm per second
13	MV-303 is stuck at the closed position
14, 15	AIT-504 reading is increased above nominal value
16	MV-101 is stuck at the open position, LIT-101 reading is set as 0.7 m
17	MV-401 is OFF abnormally, AIT-502 reading is increased above the nominal value, P-501 is stuck at ON mode
18	DPIT-301 reading is increased above nominal value, MV-302 is stuck at the open position, P-602 is stuck at OFF mode
19	P-203 and P-205 are turned OFF abnormally
20	LIT-401 reading is increased above nominal value, P-205 is stuck at ON mode
21	P-101 is stuck at ON mode abnormally, LIT-301 reading is set at 0.8 m
22	P-302 is stuck at ON mode, LIT-401 reading is set at 0.6 m
23	P-302 is turned OFF while it should be ON
24	P-201, P-203, and P-205 are turned ON abnormally
25	P-101 and MV-101 are stuck at ON mode abnormally, LIT-101 reading is set at 0.7 m
26	LIT-401 reading is decreased below min level
27	LIT-301 reading is increased above max level
28	LIT-101 reading is increased above max level
29	P-101 is turned OFF abnormally
30	P-101 and P-102 is turned OFF abnormally
31	LIT-101 reading is decreased below min level
32	P-501 is turned OFF abnormally, FIT-502 reading is set above nominal value
33	AIT-402 and AIT-502 readings are set to 260
34	FIT-401 and AIT-501 readings are set to 0.5 and 140
35	FIT-401 reading is set to zero
36	LIT-301 reading is decreased by 0.55 per second

Table A3. Sensors and Actuators in the WADI Dataset

Stage	Sensor	Actuator
1	1-LIT-001, 1-FS-001	1-P-005
2A	2-LT-001, 2-PIT-001	2-MV-001, 2-MV-002, 2-MV-003, 2-MV-004, 2-MV-005, 2-MV-006, 2-P-003, 2-P-004, 2-FS-001, 2-FS-002
2B	2-FQ-101, 2-FQ-201, 2-FQ-301, 2-FQ-401, 2-FQ-501, 2-FQ-601, 2-PIT-002	2-MCV-101, 2-MCV-201, 2-MCV-301, 2-MCV-401, 2-MCV-501, 2-MCV-601, 2-MV-101, 2-MV-201, 2-MV-301, 2-MV-401, 2-MV-501, 2-MV-601
3	3-LT-001, 3-FS-001, 3-FS-002	3-MV-002, 3-P-003, 3-P-004

Table A4. Attack Description of the WADI Dataset

Attack	Description
1	1-MV-001 is open while it should be closed
2	1-FIT-001 reading is tampered with
3, 4	1-AIT-00T reading is tampered with
5	2-MCV-101 to 2-MCV-601 are closed while they should be open
6	2-MCV-101 and 2-MCV-201 are open while they should be closed
7	1-AIT-002 reading is tampered with and open 2-MV-003 while it should be closed
8, 11, 12	2-MCV-007 is open while it should be closed
9	1 -P-006 is turned ON while it should be off
10	Cause damage to 1-MV-001 and raw water pump
13	Reduce pressure pump setpoint
14	Stop chemical dosing pumps
15	AIT-001 reading is tampered with