DL IOT SECURITY THREAT ANALYSIS RUN RESULTS:

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(python) (base) akram@ISHERIFF-M-RBNA FEDERATED_IOT_ML_SEC %
(python) (base) akram@ISHERIFF-M-RBNA FEDERATED_IOT_ML_SEC % conda
activate IOT_DL
(IOT_DL) (python) akram@ISHERIFF-M-RBNA FEDERATED_IOT_ML_SEC %
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(IOT_DL) (python) akram@ISHERIFF-M-RBNA FEDERATED_IOT_ML_SEC %
(IOT_DL) (python) akram@ISHERIFF-M-RBNA FEDERATED_IOT_ML_SEC %
python src/main.py decentralized autoencoder --test --fedavg --collaborative
--verbose-depth=1

FEDAVG DECENTRALIZED AUTOENCODER TESTING
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Using CPU
Federation params: {'aggregation_function': <function federated_averaging at
0x16494d550>, 'resampling': None, 'federation_rounds': 30, 'gamma_round':
0.75}
[{'clients_devices': [[1], [2], [3], [4], [5], [6], [7], [8]], 'test_devices': [0]},
{'clients_devices': [[0], [2], [3], [4], [5], [6], [7], [8]], 'test_devices': [1]},
{'clients_devices': [[0], [1], [3], [4], [5], [6], [7], [8]], 'test_devices': [2]},
{'clients_devices': [[0], [1], [2], [4], [5], [6], [7], [8]], 'test_devices': [3]},
{'clients_devices': [[0], [1], [2], [3], [5], [6], [7], [8]], 'test_devices': [4]},
{'clients_devices': [[0], [1], [2], [3], [4], [6], [7], [8]], 'test_devices': [5]},
{'clients_devices': [[0], [1], [2], [3], [4], [5], [7], [8]], 'test_devices': [6]},
{'clients_devices': [[0], [1], [2], [3], [4], [5], [6], [8]], 'test_devices': [7]},
{'clients_devices': [[0], [1], [2], [3], [4], [5], [6], [7]], 'test_devices': [8]}]
Reading data
█ [1/9] Data from Danmini_Doorbell
█ [2/9] Data from Ecobee_Thermostat
█ [3/9] Data from Ennio_Doorbell
█ [4/9] Data from Philips_B120N10_Baby_Monitor
█ [5/9] Data from Provision_PT_737E_Security_Camera
█ [6/9] Data from Provision_PT_838_Security_Camera
█ [7/9] Data from Samsung_SNH_1011_N_Webcam
█ [8/9] Data from SimpleHome_XCS7_1002_WHT_Security_Camera
█ [9/9] Data from SimpleHome_XCS7_1003_WHT_Security_Camera

Configuration [1/9]: {'clients_devices': [[1], [2], [3], [4], [5], [6], [7], [8]],
'test_devices': [0]}

█ Run [1/5]
█ Run [2/5]
█ Run [3/5]
█ Run [4/5]
█ Run [5/5]

Configuration [2/9]: {'clients_devices': [[0], [2], [3], [4], [5], [6], [7], [8]], 'test_devices': [1]}
█ Run [1/5]
█ Run [2/5]
█ Run [3/5]
█ Run [4/5]
█ Run [5/5]

Configuration [3/9]: {'clients_devices': [[0], [1], [3], [4], [5], [6], [7], [8]], 'test_devices': [2]}
█ Run [1/5]
█ Run [2/5]
█ Run [3/5]
█ Run [4/5]
█ Run [5/5]

Configuration [4/9]: {'clients_devices': [[0], [1], [2], [4], [5], [6], [7], [8]], 'test_devices': [3]}
█ Run [1/5]
█ Run [2/5]
█ Run [3/5]
█ Run [4/5]
█ Run [5/5]

Configuration [5/9]: {'clients_devices': [[0], [1], [2], [3], [5], [6], [7], [8]], 'test_devices': [4]}
█ Run [1/5]
█ Run [2/5]
█ Run [3/5]
█ Run [4/5]
█ Run [5/5]

Configuration [6/9]: {'clients_devices': [[0], [1], [2], [3], [4], [6], [7], [8]], 'test_devices': [5]}
█ Run [1/5]
█ Run [2/5]
█ Run [3/5]
█ Run [4/5]
█ Run [5/5]

Configuration [7/9]: {'clients_devices': [[0], [1], [2], [3], [4], [5], [7], [8]],

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'test_devices': [6]}
█ Run [1/5]
█ Run [2/5]
█ Run [3/5]
█ Run [4/5]
█ Run [5/5]

Configuration [8/9]: {'clients_devices': [[0], [1], [2], [3], [4], [5], [6], [8]],
'test_devices': [7]}
█ Run [1/5]
█ Run [2/5]
█ Run [3/5]
█ Run [4/5]
█ Run [5/5]

Configuration [9/9]: {'clients_devices': [[0], [1], [2], [3], [4], [5], [6], [7]],
'test_devices': [8]}
█ Run [1/5]
█ Run [2/5]
█ Run [3/5]
█ Run [4/5]
█ Run [5/5]
Creating folder test_results/decentralized_autoencoder_fedavg/run_0/
(IOT_DL) (python) akram@ISHERIFF-M-RBNA FEDERATED_IOT_ML_SEC %
(IOT_DL) (python) akram@ISHERIFF-M-RBNA FEDERATED_IOT_ML_SEC % ls
Correlations.ipynb          LICENSE                  ReLU and ELU.ipynb
data                  requirements.txt
Exploration.ipynb          Plot_results.ipynb          Test results.ipynb
grid_search_results          src
GS Results.ipynb          README.md                  autocorrelations_all.pdf
opt                  test_results
(IOT_DL) (python) akram@ISHERIFF-M-RBNA FEDERATED_IOT_ML_SEC %
(IOT_DL) (python) akram@ISHERIFF-M-RBNA FEDERATED_IOT_ML_SEC % cd
test_results/decentralized_autoencoder_fedavg/run_0
(IOT_DL) (python) akram@ISHERIFF-M-RBNA run_0 % ls
configurations_params.json    constant_params.json          local_results.json
new_devices_results.json       thresholds.json
(IOT_DL) (python) akram@ISHERIFF-M-RBNA run_0 % ls -lh
total 616
-rw-r--r--  1 akram  staff   1.1K Aug 27 10:17 configurations_params.json
-rw-r--r--  1 akram  staff   736B Aug 27 10:17 constant_params.json
-rw-r--r--  1 akram  staff   132K Aug 27 10:17 local_results.json
-rw-r--r--  1 akram  staff   127K Aug 27 10:17 new_devices_results.json
-rw-r--r--  1 akram  staff    39K Aug 27 10:17 thresholds.json
(IOT_DL) (python) akram@ISHERIFF-M-RBNA run_0 %
(IOT_DL) (python) akram@ISHERIFF-M-RBNA run_0 %
(IOT_DL) (python) akram@ISHERIFF-M-RBNA run_0 % cd ..
```

```
(IOT_DL) (python) akram@ISHERIFF-M-RBNA
decentralized_autoencoder_fedavg % ls -lh
total 0
drwxrwxr-x@ 7 akram  staff   224B Jul 17 09:56 0,5 5rr 0,95quantile
drwxrwxr-x@ 7 akram  staff   224B Jul 17 09:56 0,5 5rr mean+std
drwxr-xr-x  7 akram  staff   224B Aug 27 10:17 run_0
(IOT_DL) (python) akram@ISHERIFF-M-RBNA
decentralized_autoencoder_fedavg %
(IOT_DL) (python) akram@ISHERIFF-M-RBNA
decentralized_autoencoder_fedavg %
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