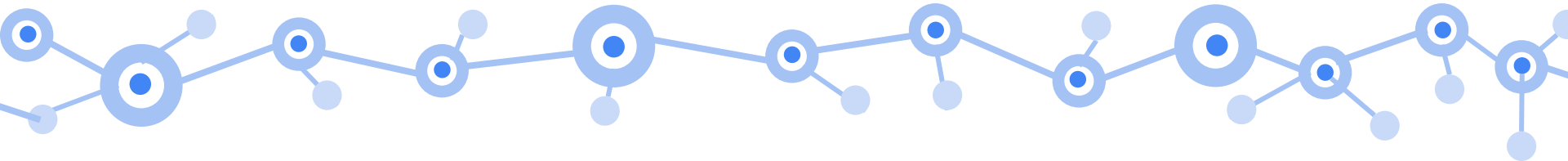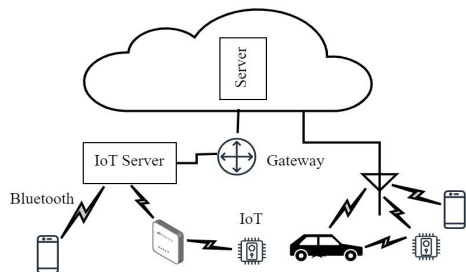# **Securing IoT Servers**
Shallow vs. Deep Neural Network Architectures

Niranjan W. Meegammana
Shilpa Sayura Foundation, Sri Lanka

Harinda Fernando
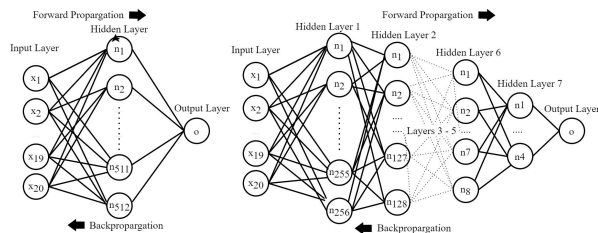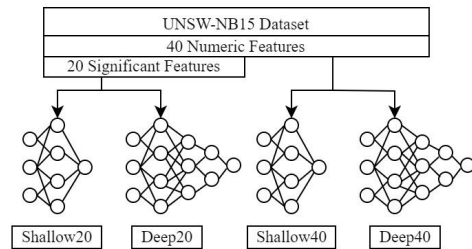### Sri Lanka Institute of Information Technology, Sri Lanka

PROBLEM

IoT servers face network attacks.
IDS are not adequate.
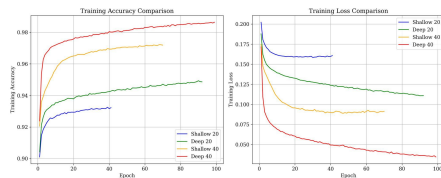Host based DNN can help.

METHODOLOGY

Shallow and Deep NN models.
Use UNSW-NB15 dataset.
Train with Supervised Learning.
Deploy on IoT environments.

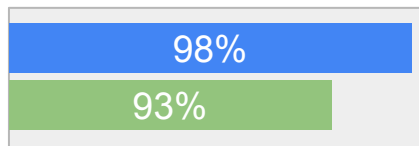## SOLUTION

20 and 40 feature datasets.
Train 2 Shallow Models.
Train 2 Deep Models.
Compare performance.

RESULTS

Model Performance

Deep40 — 98%
Shallow20 — 93%

Resource Usage

0.32%
0.25%