**Edge Computing and IoT Security**

# Edge Devices Dataset

## Description

This dataset simulates information about edge devices in an IoT environment. Each row represents a unique edge device with various attributes such as device type, location, firmware version, IP address, status, model, operating system, battery level, and last check-in timestamp.

**Possible Research Questions**

1. How does the distribution of device types vary across different locations?
2. What is the average battery level of devices in different operating systems?
3. How does the firmware version correlate with the last check-in timestamp?

# Network Traffic Dataset

## Description

This dataset simulates network traffic data between edge devices in an IoT environment. Each row represents a network communication event with attributes such as timestamp, source IP, destination IP, protocol, data size in bytes, threat category, encryption type, network bandwidth, and latency.

## Possible Research Questions

1. How does the distribution of network protocols vary in different threat categories?
2. What is the relationship between encryption type and data size in network traffic?
3. How does network bandwidth impact latency in different communication scenarios?

# Anomalies Dataset

## Description

This dataset simulates anomalies detected in the IoT environment. Each row represents an anomaly event with attributes such as timestamp, device ID, anomaly type, severity, and a description of the anomaly.

## Possible Research Questions

1. What is the distribution of anomaly types in devices of different statuses (active/inactive)?
2. How does the severity of anomalies correlate with the device manufacturer?
3. Can anomalies be predicted based on specific network traffic patterns or device attributes?

# Possible Cross-Domain Research Questions

## Integrated Analysis

1. How do anomalies in the network traffic dataset correlate with anomalies detected on edge devices?
2. Can anomalies in the network traffic dataset be used to predict potential issues on specific edge devices?

## Security and Device Management

1. What security measures are most effective in mitigating specific threat categories in network traffic?
2. How can anomalies in edge devices be effectively managed to prevent security breaches?

## Optimizing Communication

1. How do different network bandwidths impact the overall latency in the IoT environment?
2. Can the analysis of network traffic data help optimize communication pathways for specific device types?