

**DATE: 21 JULY 2025**

**DAY: MONDAY**

## **DAY 22 – Machine Learning Dataset Preprocessing**

### **LEARNING OBJECTIVES:-**

- Prepare dataset for ML-based IoT intrusion detection.
- Perform cleaning, scaling, and feature extraction.

### **Overview:-**

Day 22 introduced dataset preprocessing for training ML models on IoT traffic data. The day covered removing missing values, normalizing features, and selecting relevant parameters for classification.

### **Activites:-**

- Loaded dataset and cleaned null values.
- Normalized features and extracted ML-ready columns.

### **Insights:-**

- Understood need for balanced training data.
- Learned importance of feature engineering in model accuracy.