

**Problem statement No.41** – Power System Fault Detection and Classification The Challenge: Design a machine learning model to detect and classify different types of faults in a power distribution system. Using electrical measurement data (e.g., voltage and current phasors), the model should be able to distinguish between normal operating conditions and various fault conditions (such as line-to-ground, line-to-line, or three-phase faults). The objective is to enable rapid and accurate fault identification, which is crucial for maintaining power grid stability and reliability.

Kaggle dataset link – <https://www.kaggle.com/datasets/ziya07/power-systemfaults-dataset>

**Technology** – Use of IBM cloud lite services is mandatory.