1. Datasets Detail:

The datasets contain the following features:

* + - The datasets contain measurement of water flow for a year from 4 different outlets.
    - Every measurement is taken in a 6 hours gap
    - The date when the data is measured.
    - The time of the measurement
    - The name of the outlet from which it was measured
    - The water flow in cubic metres and in litres

1. Algorithms Used:

ResNet-18 is a convolutional neural network that is 18 layers deep. You can load a pretrained version of the network trained on more than a million images from the ImageNet database. The pretrained network can classify images into 1000 object categories, such as keyboard, mouse, pencil, and many animals. As a result, the network has learned rich feature representations for a wide range of images. The network has an image input size of 224-by-224.

1. Future Works:
2. **Operational Assessment of Water Motors**:
   * Evaluating the efficiency and maintenance requirements of water motors.
   * Identifying areas for improvement in motor performance to optimize water distribution.
3. **Optimization of Water Storage**:
   * Analysing ways to reduce water stagnation in storage tanks, particularly for drinking water.
   * Ensuring improved water quality and sustainability through better storage practices.
4. **Broader Scalability**:
   * Extending the application of the proposed system to larger and more diverse water distribution networks.
   * Addressing the challenges of integrating the system into more complex environments.
5. **Enhanced Data Analysis**:
   * Investigating additional factors affecting water consumption patterns.
   * Applying advanced analytical models to derive deeper insights into behavioural trends.
6. **Automation and System Expansion**:
   * Enhancing automation in the detection and correction processes to reduce manual intervention.
   * Expanding the network to include more IoT-based retrofit meters for comprehensive monitoring.