# REAL-TIME TDS METER

Monitoring Water Quality with AI Technology

# OBJECTIVE

- To design and develop a real-time TDS (Total Dissolved Solids) meter to monitor water quality.
- To utilize AI technology for accurate and instant readings

# PROJECT DESCRIPTION

- The Real-Time TDS Meter project aims to create a device that measures the total dissolved solids in water in real-time.
- The device will use AI-powered sensors to detect contaminants and provide instant readings

# CONCEPT, DESIGN, IDEA

- The device will consist of a microcontroller, sensors, and a display unit.
- The sensors will measure the electrical conductivity of the water to calculate TDS levels.
- The AI algorithm will analyze the data and provide accurate readings

# REAL-TIME USE CASE

- The Real-Time TDS Meter can be used in various applications such as:
- Water treatment plants
- Industrial processes
- Drinking water quality monitoring

# HARDWARE/SOFTWARE USED

- Hardware:
- Microcontroller (e.g. Arduino)
- TDS sensors (e.g. DS18B20)
- Display unit (e.g. LCD)

- Software:
- AI algorithm (e.g. machine learning)
- Programming language (e.g. C++, Python)

# OUTPUT ACHIEVED

- Accurate real-time readings of TDS levels
- Instant detection of contaminants
- User-friendly display unit

# CHALLENGE

- Calibrating the sensors for accurate readings
- Developing an AI algorithm for precise data analysis

# FUTURE SCOPE

- Integrating the device with IoT technology for remote monitoring
- Expanding the device to measure other water quality parameters

# CONCLUSION

- The Real-Time TDS Meter has the potential to revolutionize water quality monitoring
- With AI technology, we can ensure accurate and instant readings for better water management