

# Evaluating Ultrasonic Sensor for developing Flood Monitoring and Alerting System Tinkercad Simulation (IA)

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**Imaginative Abstract.** Low-cost sensors' widespread availability and vast range of applications have fueled demand for better sensor performance. To address the designers' requirement for simpler systems, integrated sensors are being created. Smart sensors are becoming essential components of systems that perform operations that were previously impossible or uneconomical to do. One example of a smart sensors is Ultrasonic sensor, an ultrasonic sensor detects and measures the distance between two objects. It determines distance by producing ultrasonic and receiving the wave reflected by the object. Ultrasonic sensors are commonly used in water-level sensing; it can be accomplished by positioning one sensor above a water surface also ultrasonic sensors can even measure fluid flow rates, an emitter and a receiver (separate in this form) are aligned with the flow of a fluid in the simplest situation. Since sound travels via a moving medium, the velocity of the fluid will affect the speed of sound in relation to these factors. Thus, ultrasonic sensors are a major component to develop a Flood Monitoring and Alerting System.

**Keywords:** Ultrasonic Sensors, Smart Sensors, Flood Monitoring and Alerting System, Emitter and Receiver.

