**ABSTRACT**

This project proposes a simple and interactive object detection device tailored for children’s safety and learning. It is designed to identify everyday objects in the child’s surroundings

and provide voice-based responses that describe the object in a child-friendly manner, along with safety information such as whether the object is harmful or harmless.

The system utilizes an ESP32-CAM module to capture real-time images of objects and stream them over a local network. Due to memory limitations of the ESP32-CAM, the detection process is carried out separately using a trained YOLOv8 model integrated via a web interface. Once an object is detected, a corresponding ID is assigned and communicated to an ESP32 Devkit board using HTTP protocol.

The ESP32 Devkit is connected to a DFMini Player with an SD card and speaker. Based on the ID received, the device plays a pre-recorded audio message stored on the SD card. These audio messages are designed to guide children with clear and simple instructions.

By combining real-time video streaming, AI-based detection, and voice feedback, this project offers an educational and safety-focused tool for children, especially in early learning environments.