R7020E Final Project

Group 6

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Introduction

The aim of this project is to develop a system that can detect objects in a given image, classify if it's a decoy
object and then estimate the relative distance of the object given the depth. The system is divided into three main
components:

- Object Detection
- Object Classification
- Depth Estimation.

Object Detection

For the object detection we trained YOLOv11 on the [FireExtinguiser](#) dataset.
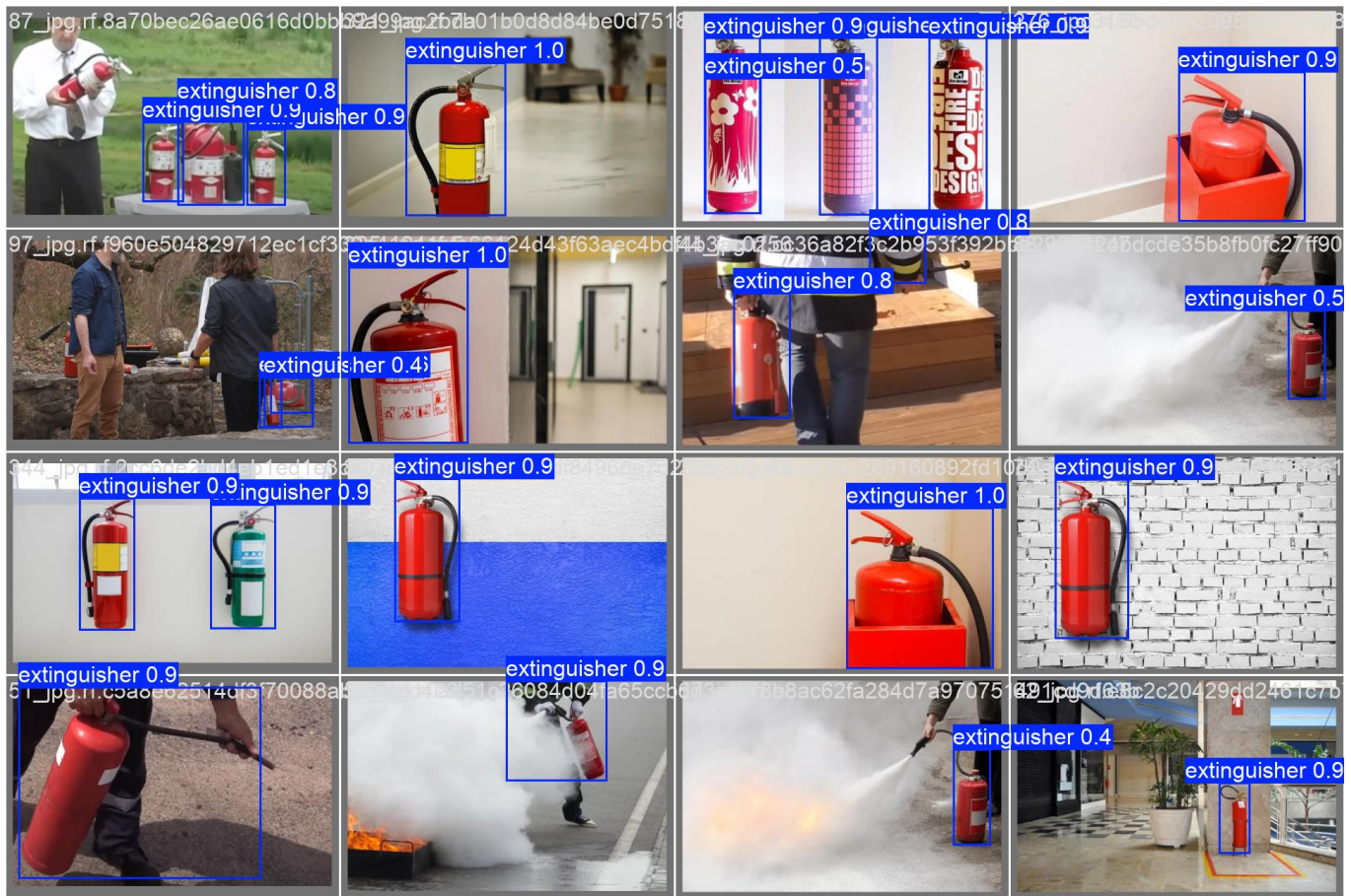
Some of the results are shown below:

Figure 1: Fire Extinguisher Detection