

Preface

Disaster response is a critical aspect of emergency management requiring effective and timely detection of objects to save lives and mitigate the impacts of disasters. In this Project we focused on leveraging deep learning and computer vision techniques specifically the YOLO (You Only Look Once) algorithm to develop an object detection for disaster response scenarios. The motivation behind this Project arises from the need for accurate and efficient object detection methods in disaster-stricken areas. Traditional approaches often lack speed accuracy and scalability. By utilizing SOTA deep learning techniques and the rich COCO dataset we aimed to develop an advanced object detection system capable of accurately detecting and localizing objects of interest in disaster scenarios.

Throughout this report we discuss our methodology results and implications. By addressing the limitations of traditional methods and capitalizing on advanced algorithms we contribute to developing more efficient and accurate object detection systems for disaster response. We highlight the significance of our approach utilizing deep learning and the COCO dataset to improve the detection and localization of critical objects. Our work aims to enhance disaster response operations by providing reliable and effective object detection capabilities.