Data Collection and Preprocessing Phase

Date	1 Oct 2024
Team ID	739704
Project Title	Railway Sentry: Detecting Workers on Railway Tracks using YOLO V9
Maximum Marks	2 Marks

Data Collection Plan & Raw Data Sources Identification Template

The data collection plan for Railway Sentry involves gathering diverse video footage of railway tracks, focusing on different weather, lighting, and track conditions. Raw data sources include CCTV footage, drone imagery, and synthetic data for YOLO V9 training.

Data Collection Plan Template

Section	Description
Project Overview	Railway Sentry uses YOLO V9 to detect workers on railway tracks in real-time, enhancing safety by identifying personnel and alerting operators to prevent accidents and improve rail operational security.
Data Collection Plan	The data collection plan for Railway Sentry involves gathering high-resolution images and videos of railway tracks under various weather, lighting, and train operation conditions, with diverse worker positions for training YOLO V9.

Raw Data Sources Identified	Potential raw data sources for *Railway* *Sentry: Detecting Workers on Railway* *Tracks using YOLO V9* include: 1. CCTV footage from railway stations and tracks 2. Thermal imaging for low-light conditions 3. Drone surveillance footage 4. Wearable GPS or RFID tracker data from workers 5. Audio data for detecting alerts and sounds

Raw Data Sources Template

Source Name	Description	Location/URL	Format	Size	Access Permissions
Dataset 1	Collected from Kaagle	https://www.kagg le.com/datasets/m ikhailma/railroadworkerdetectiondataset	JPG , Text	3.09 GB	Public

Dataset 2	Collected from roboflow	!pip install roboflow from roboflow import Roboflow rf = Roboflow(api_key="f9j0rssjqUcs6VJYoxPh") project = rf.workspace("railway-sentry").project("railway-sentry") version = project.version(1) dataset = version.download("yolov9")	JPG, Text	2.5 GB	Private (with access)