Data Collection and Preprocessing Phase

Date	15 November 2024
Team ID	739930
Project Title	Fireguardian yolov8 Empowered wildfire smoke surveillance
Maximum Marks	2 Marks

Data Collection Plan & Raw Data Sources Identification Report:

The data collection plan includes drone-based sensors, satellite imagery, and groundbased surveillance for real-time smoke detection.

Section	Description

Project Overview	The FireGuardian project leverages cutting-edge AI technology with the YOLOv8 (You Only Look Once, version 8) model to enhance wildfire smoke detection and monitoring. By integrating drone surveillance, satellite imagery, and ground-based sensors, the system provides real-time detection, accurate localization, and predictive analytics for wildfire management
Raw Data Sources Identified	Raw data sources for FireGuardian include satellite imagery from NOAA and NASA, UAV sensor data capturing smoke and heat patterns, groundbased weather stations for meteorological inputs, real-time air quality sensors, thermal imaging cameras, and wildfire incident reports from local authorities. These diverse sources ensure comprehensive and accurate wildfire monitoring.

Raw Data Sources Report:

Source Name	Description	Location/UR L	Form at	size	Access permissio ns

| Kaggle Dataset | The dataset comprises customer details(fireguardian details) | https://universe.roboflow.com/brad-dwyer/wildfiresmoke | CSV | 19.5MB | Public |