Model Development Phase Template

Date	15 November 2024
Team ID	739839
Project Title	Fireguardian yolov8 Empowered wildfire smoke surveillance
Maximum Marks	5 Marks

Feature Selection Report Template

Feature	Description	Selected (Yes/No)	Reasoning
Smoke Detection	Identifies and localizes smoke patterns in collected data.	Yes	Critical for early detection and localization of wildfire smoke.
Heat Anomaly Detection	Identifies unusual heat signatures indicating potential wildfires.	Yes	Essential for detecting fires in their early stages.
Geotagging	Associates detected smoke with geographic coordinates	Yes	Helps pinpoint exact locations for efficient response planning.

Smoke Density Analysis	Measures the thickness and intensity of smoke.	Yes	Useful for assessing the severity and potential impact of fires.
Temporal Trends	Tracks smoke patterns over time.	Yes	Allows monitoring of fire evolution and effectiveness of containment efforts.
Sensor Source Tracking	Identifies the origin of data, such as drones, satellites, or sensors.	Yes	Ensures data reliability and source-specific analysis.
Event Correlation	Links detected smoke events with reported wildfires.	Yes	Validates data accuracy and cross-references with real-world events.
Multi-Language Support	Processes alerts or reports in different languages.	Yes	Necessary for operations in regions with diverse language groups.
Response Efficiency	Tracks the time taken to detect and respond to smoke alerts.	Yes	Measures system performance and supports continuous improvement.