Statement of Work (SOW) for Luminous Inverter Manufacturing Plant AI Integration Project

1. Client Name:

Luminous Inverter Manufacturing Plant

2. Project Name and Description:

Artificial Intelligence (AI) Integration for Intrusion Detection, Fire Safety, and Predictive Maintenance in the Luminous Inverter Manufacturing Plant.

3. Objectives and Goals:

* Integrate AI capabilities to detect suspicious activities, fire, sparks, smoke, gathering, and other potential safety risks within the plant premises.
* Develop a system that notifies users about such activities through various channels (text, WhatsApp, email) for immediate resolution.
* Clip and save instances of such incidents with timestamps for further checking and sharing with concerned users.
* Evaluate the feasibility of implementing new camera systems or utilizing existing infrastructure.

4. Scope of Work:

* Analyze the plant's existing camera system (Dahua and CP+) specifications to determine compatibility with proposed AI integration.
* Design and develop an AI-powered system that can detect and notify users about suspicious activities, fire, sparks, smoke, gathering, vehicle location, unnecessary movement, human running activity, abnormal pedestrian activity, alarm, vibration, animal movement, flooded areas, light & dark

area changes, and other potential safety risks.

* Integrate the AI system with existing infrastructure (cameras, software, hardware) to ensure seamless operation.

* Develop a predictive maintenance module that can forecast potential occurrences of fire and other safety risks.

5. Timelines (Completion Duration):

* Project duration: 12 weeks

 + Week 1-4: Requirements gathering, feasibility analysis, and system design

 + Week 5-8: Development and testing of AI-powered system

 + Week 9-10: Integration with existing infrastructure and testing

 + Week 11-12: Deployment, training, and documentation

6. Resource (Total Team Head Count):

* Project Manager: 1 person

* Software Developers (Front-end, Back-end, Full-stack): 4 people

* AI/ML Engineer: 1 person

* Quality Assurance Engineers: 2 people

* Technical Writers: 1 person

* Total team head count: 9 people

7. Technology Stack (front-end, back-end, full-stack and Key Development Roles):

* Front-end: HTML5, CSS3, JavaScript (React)

* Back-end: Node.js, Express.js, MongoDB

* Full-stack: React, Redux, Node.js, Express.js, MongoDB

* AI/ML: TensorFlow, Keras

8. Budget:

The estimated budget for this project is $250,000.

9. Deliverables:

* A fully functional AI-powered system that can detect and notify users about suspicious activities, fire, sparks, smoke, gathering, and other potential safety risks.

* A predictive maintenance module that can forecast potential occurrences of fire and other safety risks.

* Documentation (user manual, technical documentation) for the developed system.

* Training for plant personnel on the use and operation of the AI-powered system.

10. Support Team and Infrastructure, Data Security, Additional Considerations:

* The client will provide a dedicated support team to ensure the smooth operation of the developed system.

* The client will also provide necessary infrastructure (hardware, software) for the system's deployment.

* Data security measures will be taken to protect sensitive information.

* Regular maintenance and updates will be performed to ensure the system remains secure and functional.

Additional Considerations:

* The AI-powered system will be designed to integrate with existing plant systems, including cameras, sensors, and alarm systems.
* The system's predictive maintenance module will be trained on historical data to forecast potential occurrences of fire and other safety risks.
* The client will provide access to the system's source code for any necessary modifications or customizations.

This Statement of Work (SOW) outlines the scope, objectives, timeline, resources, technology stack, budget, deliverables, support team, infrastructure, data security, and additional considerations for the Luminous Inverter Manufacturing Plant AI Integration Project.