CELEBAL TECHNOLOGIES

Enhance Workplace Safety with Our **Advanced Protective Equipment Detection Solution**

Our advanced Protective Equipment Detection solution **enhances safety** in the energy sector **by enforcing PPE compliance and minimizing injury risks**. Built on **Azure Machine Learning**, **Azure Container Registry**, **Azure Kubernetes Service**, **Azure Cosmos DB**, and **Azure Blob Storage**, it **detects and alerts when individuals are missing or improperly wearing** PPE like helmets, gloves, and safety glasses.

Traditional methods lack real-time monitoring and scalability, leading to safety violations. This solution bridges that gap with automated, **continuous checks and instant alerts**. It uses **Azure Custom Vision**, **Segment Anything Model (SAM) for pixel-level segmentation**, and **OpenAI CLIP (Contrastive Language-Image Pre-training) for zero-shot learning** of unfamiliar PPE types.

Gartner projects **global IT spending** in the power and utilities sector to reach **$249.1 billion in 2025**, a **10% increase** from **$231.2 billion in 2024**. This growth is expected to continue with a **10.3% CAGR**, reaching **$385.6 billion by 2029**.

Key Features

- Advanced Data Analytics
- Easy to Integrate
- Precision Identification
- User-friendly Interface
- Real-time Monitoring and Alerts

Core Benefits

- Reduced Injury and Fatality Rates
- Enhanced Compliance with Safety Regulations
- Improved Asset Management
- Reduced Need for Manual Inspections

Impacts

3X	60%	2X	40%	65%
Improved Equipment Protection	Reduced Downtime	Enhanced Safety	Optimized Resource Allocation	Cost Reduction

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