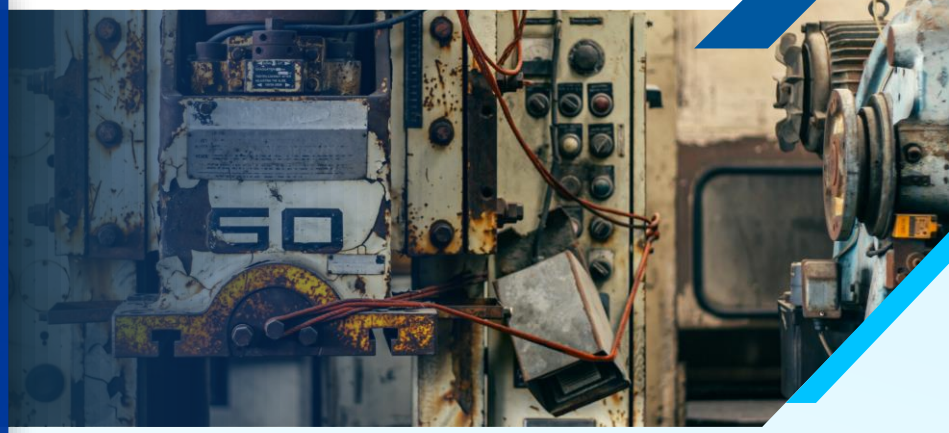
CELEBAL TECHNOLOGIES

Unleash Unrivalled Safety and Efficiency with Our **Broken Insulator Shell Detection Solution**



The Broken Insulator Shell Detection solution **accurately identifies cracks**, **corrosion**, and **surface defects** with minimal manual effort. Built on **Microsoft Azure technologies**, **Machine Learning**, **Kubernetes**, **Container Registry**, **Cosmos DB**, and **Blob Storage**, it enables continuous visual analysis for **early fault detection**.

Using **Azure Custom Vision**, **Segment Anything Model (SAM)**, and **OpenAI's CLIP (Contrastive Language-Image Pre-training)**, it supports **few-shot learning** to adapt quickly to new insulator types. This solution helps energy enterprises **reduce downtime**, **improve safety**, and **maintain grid reliability**.

***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

- Automated Damage Detection
- Proactive Monitoring & Analytics
- Seamless Integration
- Instant Alerts & Notifications
- Predictive Maintenance

Core Benefits

- Asset Protection
- Optimized Resource Utilization
- Enhanced Operational Safety
- Minimized Downtime
- Maximized Efficiency and Productivity

Impacts

2X	Enhanced Asset Management
60%	Minimized Downtime
3X	Cost Optimization
40%	Improved Operational Efficiency
5X	Reduced Safety Hazards

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