

# Industrial IoT Cloud System

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## Overview

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This is a cloud-based Industrial Internet of Things (IIoT) monitoring and visualization system built with Grafana.

*Note: Due to confidential data restrictions, video demonstrations are not available. Please refer to the screenshots in the /Image folder for system previews.*

## Key Features

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- Real-time IIoT device monitoring and data visualization
- Equipment status tracking and statistical analysis
- Interactive dashboards and mapping interfaces
- Automated data collection via web crawlers
- Custom algorithms for industrial data processing

## Technology Stack

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### Backend:

- Flask (primary framework)
- Django (secondary framework)
- RESTful API design
- Python-based algorithms and test software

### Frontend:

- Vue.js
- Element UI
- JavaScript, HTML, CSS

### Database:

- MySQL
- PostgreSQL
- Redis

### DevOps & Tools:

- Linux
- Docker
- Supervisor
- Kubernetes (basic implementation)
- Postman / Apifox (API testing)

## Architecture

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Front-end and back-end separation architecture with RESTful API communication.