

A vertical line on the left side of the slide, with a blue upper portion and a red lower portion.

# Case Study

# Missing Nuts & Bolts

## Solution Scope

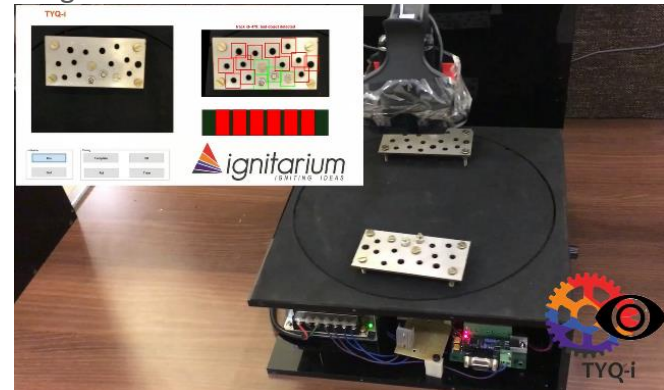
- Develop a solution for detection of missing nuts & bolts
- Target hardware: Low cost embedded platforms with hardware accelerators (GPU, DSP, custom HW)



Lab Setup Emulating Conveyor Belt

## Highlights

- Custom neural network and algorithms to achieve higher accuracy and speed
- Uses consumer grade webcam for image sensing
- Requires only few hundred images during training
- Incremental training of neural network with data augmentation



Detecting Missing Nuts/Bolts in Real Time



# THANK YOU



email: [info@ignitarium.com](mailto:info@ignitarium.com)

## Ignitarium Technology Solutions Pvt. Ltd.

Bangalore, India  
#2615, 3rd Floor,  
27th Main Road, Sector 1,  
HSR Layout,  
Bangalore – 560102  
Phone: +91-80-30723694

Kochi, India  
5th Floor, Crescens Tower,  
NH-47, Changampuzha Nagar,  
Kochi - 682033  
Phone: +91 484 2933073

## Ignitarium Inc.

United States  
2570 N. First Street,  
Suite 200 San Jose, CA 95131  
Phone: +1 512 640 3488