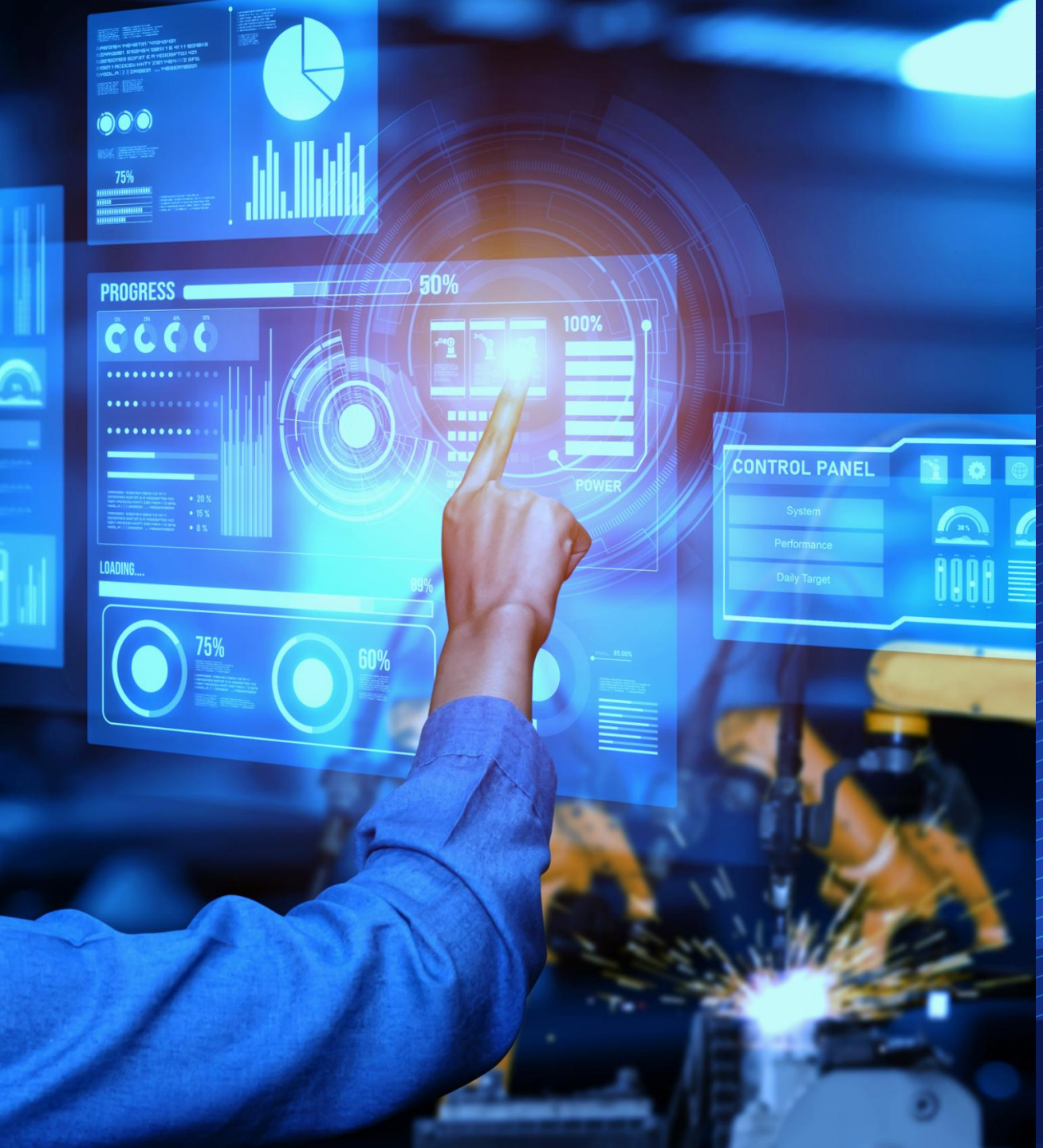


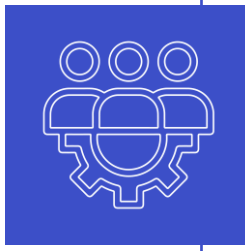
Loopr AI

Automate Processes. Derive Insights. Reduce Costs!

Challenges in
Manufacturing today...

Rising Labor Costs & Inflation

Increasing pressure to reduce costs, due to the ongoing economic uncertainty. This requires streamlining operations, reducing waste, and maximizing efficiency.



Supply Chain Instability

Significant disruptions in global supply chains, has led to shortages of raw materials, transportation difficulties, and other supply chain issues that make it difficult for manufacturers to produce and distribute their products.

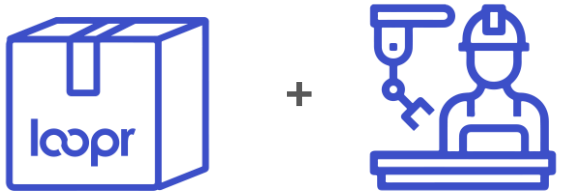
Workforce Shortage

Record numbers of unfilled jobs and shortfall of **2.1 Million skilled jobs** by 2030 will limit growth causing companies to automate processes.

LooprIQ Inspect: **4 easy Steps**

1 Receive Data Collection Hardware

- Loopr ships data collection hardware - Camera & Edge device with instructions
- Loopr team assists at every step



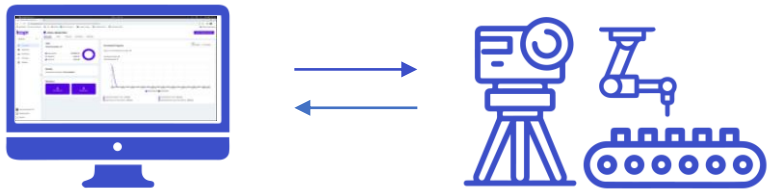
2 Collect Data

- Mount camera near production line with clear line of sight of the product and run Loopr app
- Data is uploaded to Loopr Cloud Platform

Tripod Camera

3 Loopr trains AI with your data & deploys

- Loopr team customizes proprietary AI software with your data and deploys software back to the same hardware & Loopr app
- Solution is ready for use in production to augment human capabilities with AI automation



4 Dashboard & AI Retraining

- Use data rich dashboard to derive insights about your processes over days/weeks/months
- Loopr trains your team to monitor and improve AI software accuracy as needed, with the user friendly Loopr App

Dashboards

Results

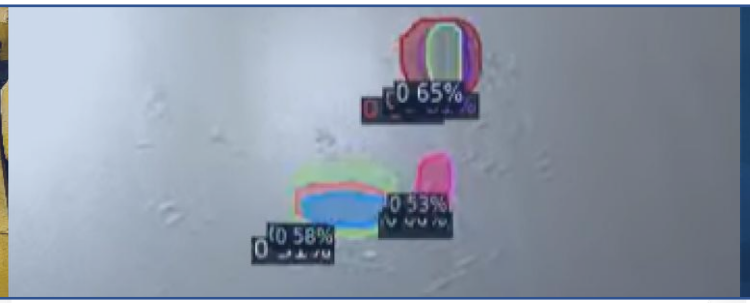
Outcomes **& Benefits**

1	IQInspect automates manual processes without the need for constant human supervision	More labor hours availability/ substantial cost savings
2	Typical ROI within 6 months	Recover costs faster & enjoy continued savings
3	QC inspection process is digitized allowing for rich analytics of the operations	Promotes Traceability & allows for Insights on Defect trends
4	Customized for your defects and use case	Improved Flexibility

Loopr AI

Success Stories

Visual Inspection
in Discrete Manufacturing



1 Challenges

- A leading Laminate manufacturer(Mica) has human dependent visual defect detection process for defects like blisters, waves, wrinkles and voids.
- If not detected early, these defects prevent bonding between different sheets causing delamination resulting in customer escalations

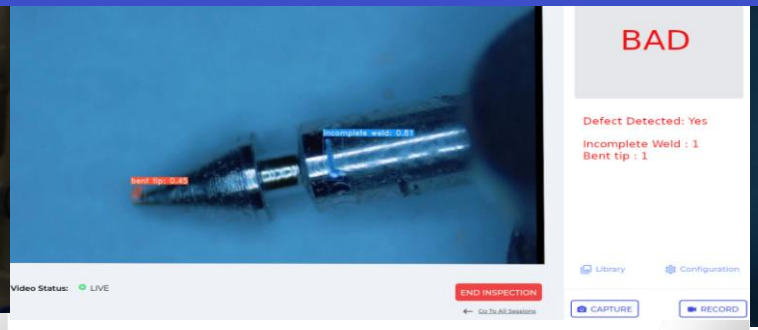
2 Ideal Solution

- LooprIQ Inspect was customized & deployed to identify customer's defects like blister, waves, voids etc. on the mica surface
- IQInspect identifies these defects on the line in real-time and raises an alert to line operator
- Demo Link

3 Desired Outcomes

- **60%** drop in the product rejection rate by their customers
- Saved dollars due to automated QC processes, leveraged human labor in more complex tasks

Automated Defect Detection
in Medical Device Manufacturing



1

Challenges

- A Fortune 500 Medical device company manufacturers high precision parts for surgical use and had defect escapement issues despite having a 2 gate QC process
- Due to the fine nature of part, measuring 0.5mm in diameter, it was a tedious task to inspect them manually with consistent accuracy under a microscope leading to eye fatigue among operators

2

Ideal Solution

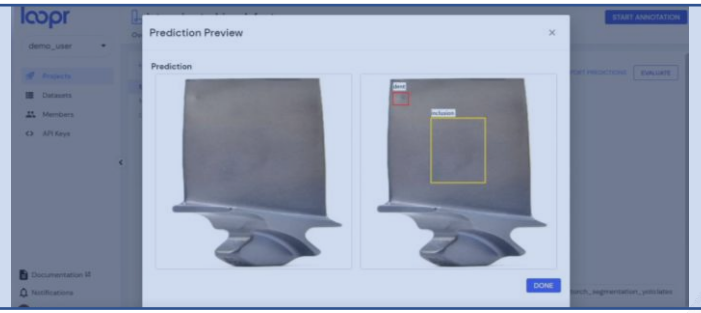
- LooprIQ Inspect was deployed to assist the visual inspection process as a co-bot for human inspectors
- Software detects micron level defects like bent tips, incomplete welds etc.
- Demo

3

Desired Outcomes

- Customer was able to improve **throughput** from earlier 15 parts/hr to 60 parts/hr, **a 300% increase** while reducing eye fatigue of operators
- Customer was able to bring down 2 gate QC process to a single gate process and projects labor **cost savings by 100% equivalent to $100K/line.**

AI Vision based Visual Inspection
of Turbine blades



Challenges

- A leading MRO service player wants to avoid human bias in determining need for an expensive teardown part piece inspection using initial borescope-based inspection
- Once the inspector comes across a defect using borescope, he has to decide if its acceptable which often depends on his experience & risk appetite. Both these tasks are time consuming & tedious processes prone to human error caused by fatigue or complacency.

Ideal Solution

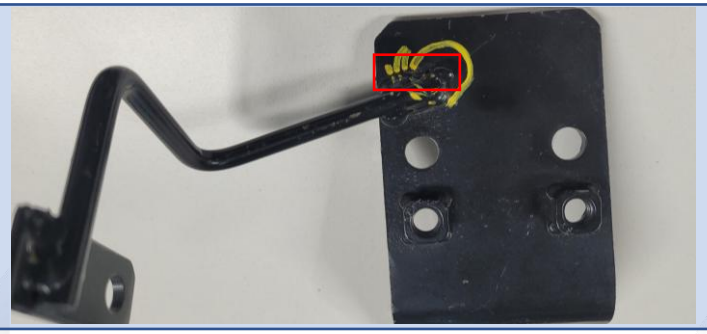
- LooprIQ Inspect was customized to detect common blade defects such as dents, inclusions, cracks etc. and is successfully able to detect these defects
- Demo Link

Desired Outcomes

- Loopr solution acts as a Co-Bot & assist the human inspector by improving inspection quality & repeatability, while decreasing the inspection times
- Loopr's AI software can eliminate human bias & help avoid unnecessary costly tear down of the assembly or scrapping of airworthy parts saving substantial costs

AI vision based Weld Defect Detection

In Automotive Manufacturing



1

Challenges

- An Automotive TIER 1 Manufacturer faces quality issues with robotic welding, as it being a defect prone task due multiple factors like contaminated surface, moisture, improper gas flow rate etc.
- Quality of welds has a direct impact on the product's integrity; hence they have a manual visual inspection process for 100% of parts which makes it a tedious & error prone process due to human fatigue

2

Ideal Solution

- LooprIQ Inspect detects "Welding drop through" defects & using a high-res smartphone camera clubbed with an NVIDIA GPU, we are successfully able to detect these defects
- Loopr's AI software can be trained further with additional welding defect images to improve accuracy & to detect new types of defects
- Demo Link

3

Desired Outcomes

- Loopr solution would allow the customer to identify welding defects early on and reduce defect escapements
- It would reduce downstream rework costs and scrappage as defects are detected early on