



# Use Case

## Quality Control - Welding Solution

### NEED

Develop a reliable way to detect and flag welding irregularities on car doors manufactured for a German sports car maker

### OUTCOMES

- Elimination of up to 70% of the false positives
- Less time-consuming rework of non-defective (false positive) units
- AI model trained to recommend rework vs scrap for flagged units

**CUSTOMER:** Tier 1 Automotive Part Manufacturer

### CHALLENGES

- The legacy system generates an unacceptably high number of false positives in one of three defect categories
- The system correctly classifies pinholes and splatter, but incorrectly identifies edge-offset defects
- The main challenge was to improve the overall accuracy of the system by reducing false positives in edge-offset analysis to reduce costly rework

### SOLUTION

We deployed an AI-model instead of a conventional machine vision program to analyze the image scans generated by the legacy camera system

### PROCESS

- Training of AI model by showing it samples of welding seam defects so it learns to differentiate between correct and incorrect edge-offsets
- Further improvement through deployment of model into production. An operator can review and correct any mistakes made by the AI-model and retrain the model with the new annotated images on a periodic basis

#### Contact Us

Accella AI

Tina Baumgartner, VP of Business Development  
510-508-8462, [tina@accellagroup.com](mailto:tina@accellagroup.com)