



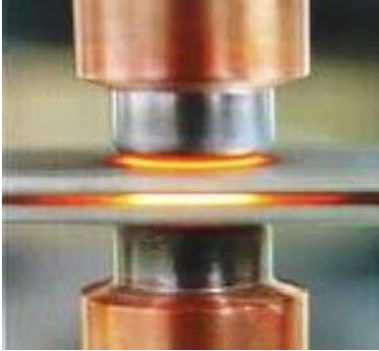
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GENERAL MOTORS



TDO 4.0 - Snake Robot for Spot Welding Inspection Activities

Motivation

An average of 3500 spot welds constitutes automotive body shells. Industrial facilities can achieve the amount of 60 cars produced in 1h. The feasibility of large-scale inspection by image depends on an intelligent end-effector capable to extract high volume of images and complex geometries. Inspecting more welds allows industry to reduce production costs by better manufacturing's control.

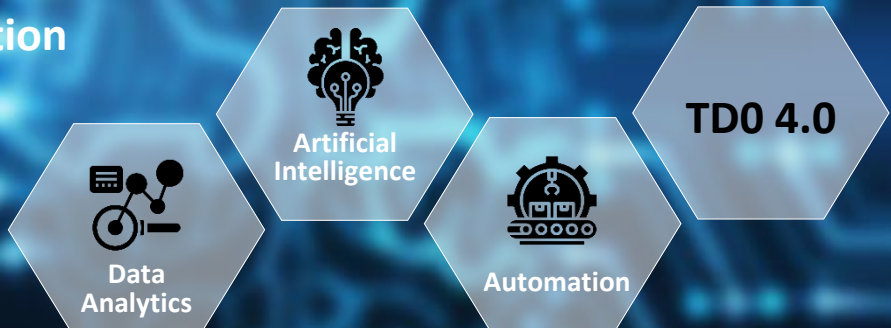
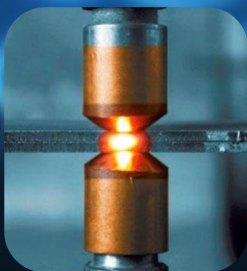
Objective

Develop an end-effector light and small to promote high volume inspection in complex geometry of automotive body shells for automotive industry.

Approach

Work together with automotive industry to stablish product requirements, develop an end-effector concept capable to capture process images. Study the influences of external conditions (illumination and positioning), as well as its applicability for different process conditions.

Spot Welding Inspection



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