Use Case
Predictive Maintenance of Rivet Guns

Accella AI

Customer Tier 1 Automotive Part Manufacturer

Need Avoid unplanned breakdown of rivet gun robots which results in unplanned downtime of the entire manufacturing line for undercarriages and causes *excess* repair charges.

Challenge Improve health status monitoring of rivet gun robot while simultaneously reducing maintenance cost.

Solution We developed and deployed a machine learning model that determines the remaining useful life of the rivet gun tool.

Process We collected rivet gun error messages and analyze repair history and used that data to train an AI-model to calculate the remaining useful life of the equipment.

We then implemented the AI model and continued training it with additional data over time which boosts accuracy of the model.

Predicted remaining useful life of the equipment will be used to build a maintenance calendar.

Outcome AI-based predictive maintenance of the rivet guns avoids expensive service of robots experiencing unplanned downtime and reduces losses caused by line downtime.

Example: Prediction of Estimated Days to Repair of Equipment

Display Historical Data | Operator View

DateTime	DeviceID	ToolID	Issue Description	PM to Date Cycles	Est. Days to Repair
2021-12-30T00:00:00	167-02-80-R2	1	maintenance PM	0	5
2021-05-01T00:00:00	167-06-1030-R1	1	1M Cycle PM Due	1025639	9
2022-04-25T00:00:00	167-06-1060-R1	1	Absolute posistion inv	610496	33
2021-04-24T00:00:00	167-06-1060-R2	1	1M Cycle PM Due	1196752	50
2021-09-29T00:00:00	167-06-1060-R2	1	broken shear pin	335300	60
2021-10-13T00:00:00	167-06-1060-R2	1	Roller Screw Abrasions	0	72
2020-11-11T00:00:00	167-06-140-R1	1	Questionable Shear Pir	132365	102
2021-12-30T00:00:00	167-06-140-R1	1	1M Cycle PM Due	1211902	150

Contact Us

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