



POLYALGORITHM MACHINE LEARNING

Joe Lafleur, CEO

Gaston Gonnet, Chief Scientist



Next Generation
Manufacturing Canada

PROJECT DESCRIPTION

- Use Artificial Intelligence to predict mechanical failures before they happen
- Present actionable warnings to machine operators
- Reduce downtime and avoid catastrophic failures
- Optionally, use AI to perform quality assurance on every part produced

PROJECT DURATION:

6 months
Up to
4 years

STARTING MRL LEVEL:

ENDING MRL LEVEL:

PROJECT OBJECTIVES

- Collect sensor data from large machinery (stamping presses)
- Train AI models to predict mechanical failures and/or part quality
- Deploy models, let operators halt machinery before imminent failures
- Easy to trial, prove, then roll out in stages to multiple machines



OUR EXPERTISE AND ROLE IN THE PROJECT:

- History of applying Machine Learning (4 years) across multiple industries (Finance, Agriculture)
- Manufacturing study (progressive stamping press)
 - Predict faults with 93% accuracy 30s before failure
 - Predict faults with 90% accuracy 2 mins before failure
- PolyML use 26 state-of-the-art Machine Learning algorithms, selecting best performing models
- Proprietary method transforms sensor data streams into suitable input for Machine Learning

EXPERTISE WE ARE LOOKING FOR:

- Manufacturer with desire to reduce mechanical downtimes and avoid catastrophic failures
- Machine data collection (high frequency) / data management
- Plant-floor dashboarding