

# PICKING UP POORLY WRAPPED STEEL COILS

## CHALLENGE

Eye of the steel coil, where the lifting equipment grabs, gets covered with wrapping materials like wrapping sheets or metals. Design a technique for determining the type of bound material and give a cognitive decision to the grabbing system on further actions.

## PARTNER

CareGo Tek Inc.



CareGo (Burlington, Ontario) provides products and services that allow manufacturers such as steel mills, steel service centres, and pipe and tube mills to use automation with unprecedented ease, protection, and productivity to transport, store, and retrieve heavy products.

## TEAM

- Mr. Robert Edwards, Director, R&D CareGo Tek Inc.
- David Arango, Product Development Lead, CareGo Tek Inc.
- Marty Donovan, Business Analyst, CareGo Tek Inc.
- Dr. Tom Wanyama, Assistant Professor, McMaster University.
- Dr. Ishwar Singh, McMaster University.
- Arman Singh, Dilpreet Jassal, Sriaravindh Rajagopal, Students, M.Engg. Manufacturing

## MILESTONES & OUTCOME

- Bio-inspired camera operation that works similar to human vision.
- Customizable for other metal rolls like copper, aluminium, brass and zinc.
- Easily deployable and trainable software.

## VALUE

Deployment of this project is expected to reduce a downtime of 20 minutes in an error cycle thereby improving productivity and reducing the Mean Time To Repair.

## NEXT STEPS

- Sensing the hidden metallic coil with IR vision / Acoustic sensors / Laser diffraction.

## STUDENT REFLECTION

- Learnt how to manage projects under risky circumstances through risk mitigation.
- Scope of imaging and machine vision in the industrial quality arena.
- Understanding the functioning of Canadian Enterprises

