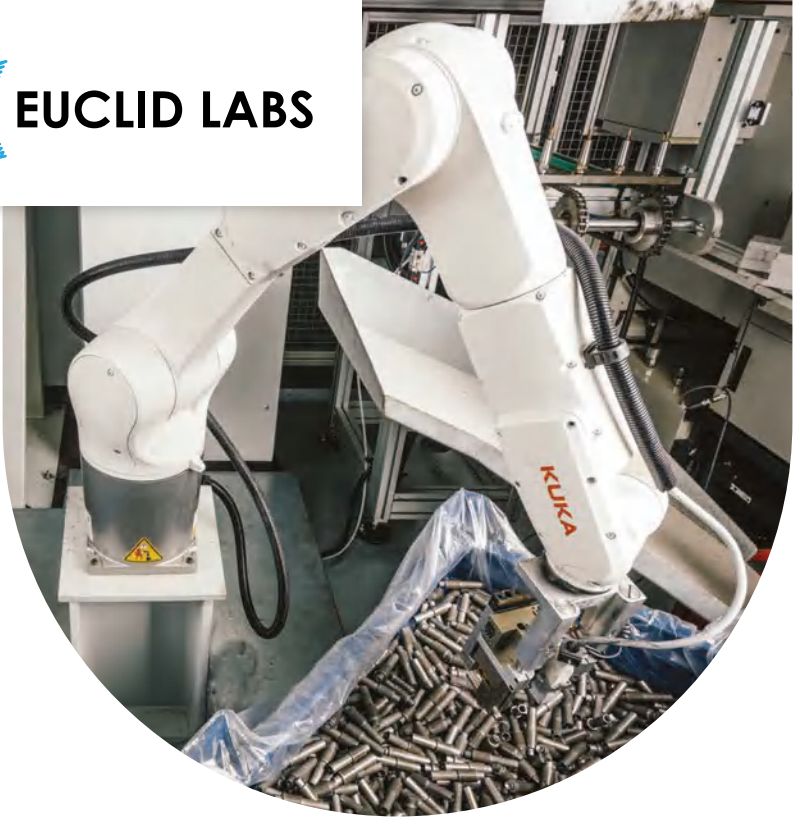
EUCLID LABS



MOONFLOWER

BIN PICKING SOFTWARE WITH

PERFORMANCE | PREDICTABILITY | CUSTOMIZATION | RELIABILITY

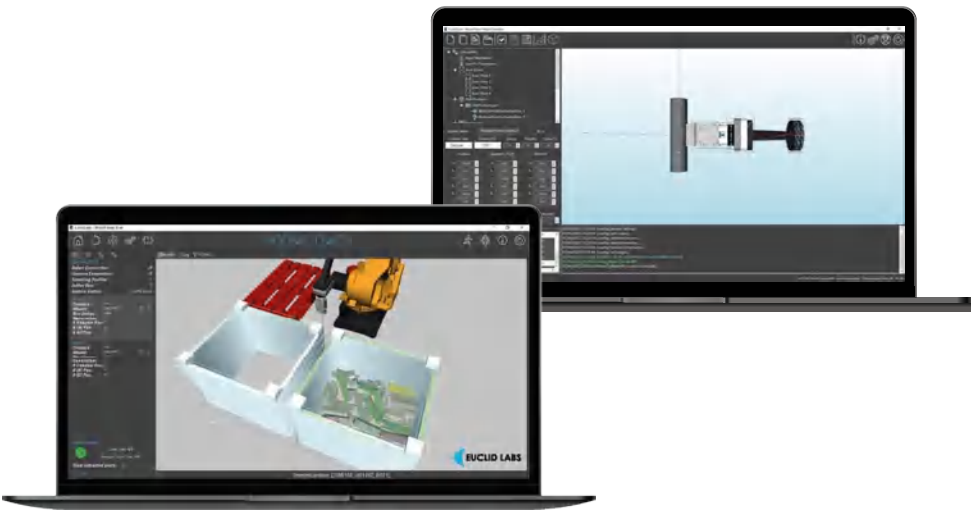
WHAT IS MOONFLOWER

Moonflower is our random bin picking solution.
It generates trajectories to pick parts in a bin with a robot.

Products are localized using 3D data provided by one of the supported scanners: fast and robust matching algorithms are exploited to find the 3D position and orientation of an object starting from its CAD model.

Moonflower generates a picking trajectory starting from the pose of a localized product, checking for collisions between the robot and the surrounding environment.
It can be configured to use multiple grippers and different picking strategies.

In addition, when the shape and distribution of the products inside a bin are very complex, an automatic extraction strategy can be defined for a product model to allow the robot to take out the grasped part in a clean way.



ADVANTAGES

- Sensor can be moved over different boxes or placed on robot hand.
- Automatic calculation of deposit point when multiple picking positions are available.
- Customizations available through a very flexible plugin system.
- Straightforward process that starts from a CAD model.
- Flexible picking since many possibilities are available.
- Select the sensor that best optimizes your parts / accuracy / cycle / costs requirements.
- Fast cycle thanks to efficient algorithms and usage of multiple parts per image.
- Get the maximum out of your robot thanks to an outstanding path planner.

SUPPORTED ROBOTS

KUKA FANUC ABB

Kawasaki EPSON

STÄUBLI YASKAWA NACHI

HYUNDAI DENSO COMAU

SUPPORTED SENSORS

WHAT CAN I DO WITH

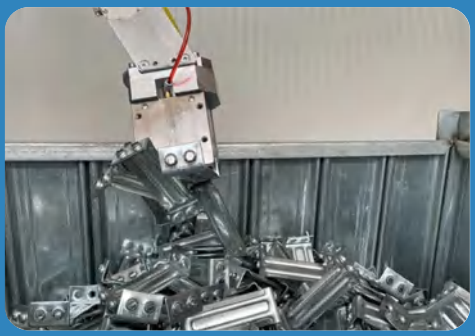
MOONFLOWER

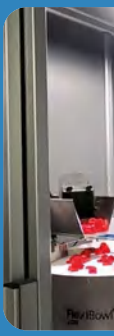
1 Loading turning centers

Moonflower is commonly used to drive a robot that serves two turning centers at one time picking from two bins with different parts.

Depending on layout and cycle time, the system could use two cameras or a single one moved from one box to the other.

A flexible gripper makes model switching almost instantaneous. Everything is programmed easily from a 3D CAD file.





2 Loading a panel bending machine

A special part model is designed to easily pick metal sheets, even when the thickness is a fraction of a millimeter.

Starting from a 3D or 2D drawing (dxf, geo, hpgl), it is possible to define directly in the CAD file where to pick and how to place the part.

A plugin for palletizing a bent part is also available.

3 Moving from box to conveyor (or vibrational unit)

Sometimes a robot is already installed to pick parts from a conveyor at a fast pace, so all you need is to fill the system with parts from the bin.
In this case, we suggest to use Moonflower with a cost-effective 3D camera (usually ToF) and a gripper that can take a bulk of parts (often a magnet) to empty the bin efficiently.

4 Picking from a bulk feeder system

Moonflower has a special version for picking parts from a bulk feeder, therefore solving some issues of standard systems such as: distinguishing flipped parts, having an accurate picking at different heights, and defining multiple picking positions from a CAD file if the product is complex.

5 Loading billets in an oven

Billet's model can be automatically generated from parameters received by a PLC or user input for both cylindrical and squared section types.

Often, cycle times allow the implementation of a camera on the robot end-effector so several bins could be served with no additional costs.

6 A plenty of tasks for your industry!

- Marking the top or bottom of a bulk;
- Localizing pockets into trays for proper placement of components;
- Guiding a robot to milk cows;
- Driving a robot to plug connectors;
- Calculating trajectories to handle a cable.

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