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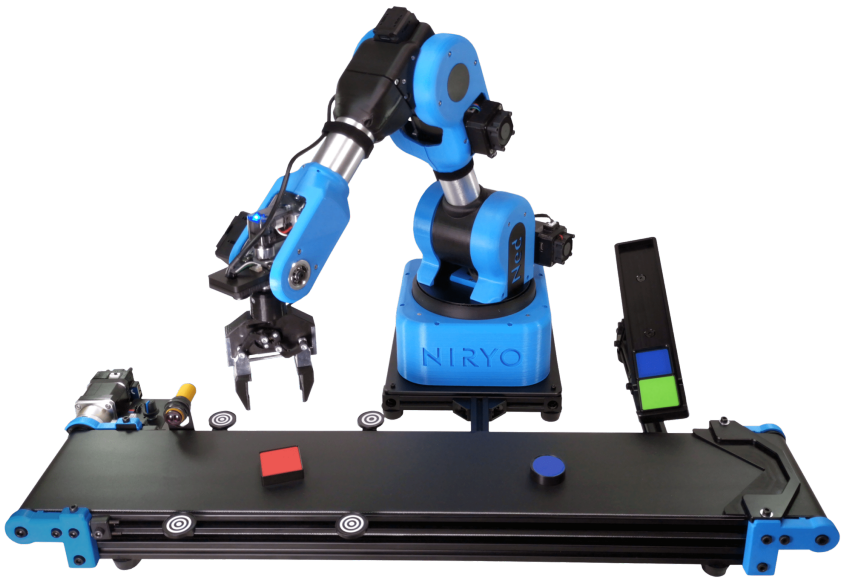
NED

Ned is a **collaborative** and **open source 6-axis robot** made in France for:

- Higher education
- Vocational training
- R&D laboratories

Its use is particularly adapted to study robotics and programming in the context of the **industry 4.0**. Ned is the second manipulator robot developed by Niryo, after the Niryo One, bringing up improvements:

- Ned is **adaptative**
- Ned's mechanical structure relies on aluminum parts, that makes it more robust
- New EasyConnect system for easy tool changes



Features

A powerful robot

- Powered by Raspberry Pi 4.
- 3 Dynamixels XL servo motors.
- 3 NiryoSteppers motors.

Effective design

- **Affordable** and **polyvalent**.
- **6 degrees of freedom** to stay true to the industry context.

ROS

- Based on ROS.
- Animated by MoveIt
- Rviz and Gazebo simulation
- ROS Package

CoppeliaSim and Webots

- Webots model available
- CoppeliaSim model available soon
- Used for simulation and **Digital-Twin**.

Multiple End Effectors

- 3 different grippers,
- Custom gripper jaws
- A vacuum pump,
- And an electromagnet.

Ecosystem

- The Conveyor Belt to prototype **production lines**
- The Vision Set and its on-wrist camera to perform **image recognition**

A full open source robot

- 3D printed
- Source code and STL files accessible
- Fully customizable

TUlip

TUlip is a humanoid robot developed in the Dynamics and Control group of the department of Mechanical Engineering at the Eindhoven University of Technology.

TUlip was designed and realized in 2009 by the Eindhoven University of Technology in cooperation with the Delft University of Technology, the University of Twente en Philips. The robot is 125 centimeters tall, weighs approximately 25 kilograms, and has two legs with each six degrees of freedom. An inertial measurement unit provides orientation information for the robot and a head with a stereo vision camera system mounted on a neck mechanism gives TUlip 3D vision. Contact forces with the ground are measured through pressure sensors under its feet.

Research in the humanoid robotics group focuses on dynamics and balance of human-like walking, computer vision, localization and path planning to ensure autonomous operation of walking robots in natural environments, such as homes, offices and hospitals.