



Academic Representative



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**EDUCATION · RESEARCH · INDUSTRY 4.0** 

NIRYO

## A COMPLETE ECOSYSTEM

# EXPERIMENT

Thanks to the Vision Set:

- Set your own workspace thanks to the landmarks and the calibration tip
- Develop your skills in Artificial Intelligence, Image Processing and Machine Learning
- Improve the prototyping of your production lines
- Optimize your Industry 4.0 oriented processes

## LEARN

Ned2, the open-source collaborative robot for the learning and the reproduction of advanced Industry 4.0 oriented processes:

- Six-axis cobot
- Aluminum structure
- Stepper equipped with the Silent Stepper technology
- Based on Ubuntu 18.04
- ROS Melodic
- Raspberry PI 4



1.5 GHz



4Gb RAM LPDDR4 **SS** 

up to 5 Gb/s



**Wi-Fi 5** 802.11 g/g/n/ac

Easier to use than ever thanks to its improved Human-Machine Interface:

- LED Ring
- Speakers
- Control panel

# PROTOTYPE

Prototype production lines inspired by the Industry 4.0 thanks to our Bundle Conveyor Belt (v2), composed of:

- A Conveyor Belt
- 6 pawns of different shapes and colors
- A slope
- A end-stopper
- An Infrared sensor

Its metallic structure has been rethought in order to allow the users to focus on their learning.

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# OUR ACCESSORIES

#### ADAPTIVE GRIPPER

VACUUM PUMP

porous surface

Allows to grasp objects

with a plain and non-

Ideal to grasp nonstandard objects.

# 10 St

#### <mark>large</mark> Gripper

Ideal to grasp large objects or smaller ones, at a bigger distance.



#### ELECTRO-MAGNET

Allows to easily catch one or several metallic pieces such as screws.

## ONLINE DOCUMENTATION

Get a **free access to documented ressources** on our website **<u>docs.niryo.com</u>** in order to apprehend, in the best way, your robot and its use.

- Complete documentation
- Tutorials
- Applications examples...

This provides you therefore with complete ressources to allow you to deepen your learning of **robotics**, the **different programming languages** (Blockly, Python, ROS, C++),

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simulation, image processing, and much more.

**Teacher**?

Offer your students the opportunity to **learn** at their own pace, by exploring the different options at their disposal.

## LANGUAGES & PROTOCOLS

# ROS

OS designed for **robotics**, it allows you to use **standardized functions**. with different languages such as **Python** and **C++**.

## PYTHON

Multi-plateforms, powerful and versatile programming language.

### MATLAB

Allows to analyze the difference between **actual** and **theoretical trajectory curves**.



Communication protocol that is essential in many industrial settings.

## EASY PROGRAMMING WITH NIRYO STUDIO

With **Niryo Studio**, our **free desktop software**, discover programming through **Blockly**, a Google library allowing to **control your robot in a visual and intuitive way**.

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#### No programming knowledge required!

Simply drag the block of you choice and drop it inside your workspace.

Assemble several blocks and press the "Play" button to launch your sequence.



Founded in 2016, Niryo is a **French start**up specialized in the making of **cobotics** solutions for **Education**, **Research** and **Industry 4.0**, as well as in the development of software solutions designed to make robotics accessible to everyone.

Niryo is now a key player of the development of **six-axis**, **collaborative** and **open-source robot arm**, with **2500 robots sold** in more than **50 countries** around the world. The start-up also now employs **more than 30 employees**.

In order to allow its users to **discover the industry of tomorrow** and implement, on a small scale, **their own production lines Industry 4.0 oriented**, Niryo also provides a **Conveyor Belt** as well as a **Vision Set** that allows **the use of advanced functions** such as **Artificial Intelligence**, **Image Processing** and **Machine Learning**.

