



**3DEXPERIENCE®**

# Body Motion

Poppy Body Language



# Activity Content

Available in "data library" tab

- ▶ 3DXML model
  - ▷ Final\_Multi\_Torso\_Poppy\_Compliant\_Root.3dxml
- ▶ FMI
  - ▷ Poppy\_FMU\_3DEXPERIENCE.zip

# About this course

The objective of this course is to explore interactions available with the Poppy's camera.

## ► Audience

- ▷ Educators and students interested in coding.

## ► Prerequisites

- ▷ **Activity 2 | From Real to Virtual**
- ▷ Knowledges about Python
- ▷ CATIA Functional and Logical Design Fundamentals
- ▷ CATIA Dymola Behavior Modeling Essentials

## ► Upon completion you will be able to

- ▷ Create and teach a new language to poppy

## ► Keywords

- ▷ Systems Engineering: Virtual Twin, Co-Simulation, Python
- ▷ Mechatronics: Control, Modeling, Learning, Coding

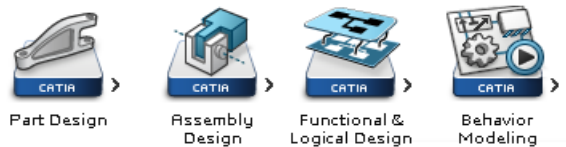
# Environment Requirements

In order to practice, you must have access to a software installation and environment that include:

- ▶ The **3DEXPERIENCE R2017x** platform in English
- ▶ Roles granted :



- ▶ Access to the following applications :

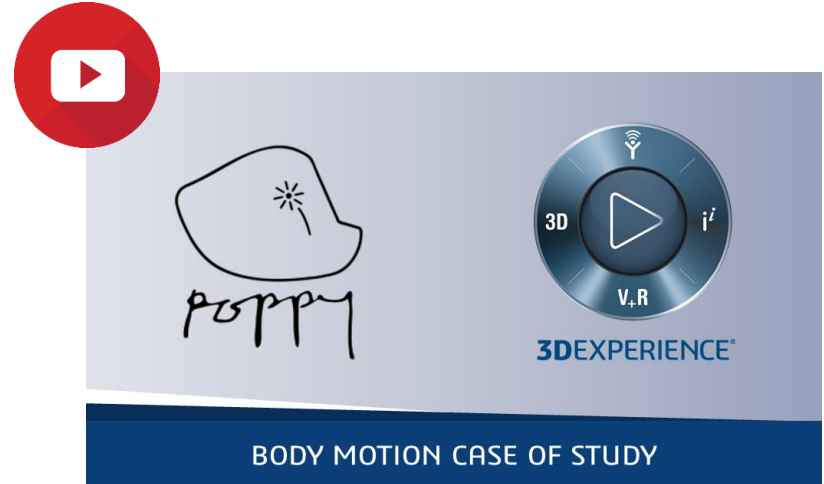


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# 1. Case of Study : Poppy Body Motion

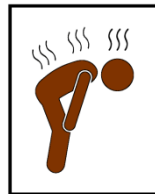
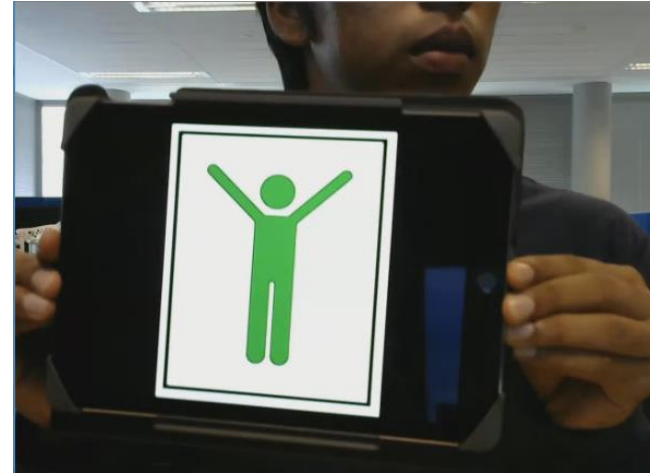
In this workshop we will illustrate the main steps to realize the Poppy Body Motion Scenario using the virtual twin concept, primitives applications graphical user interface, the Poppy camera and a tablet.



## 2. About shape recognition application

It is tracking algorithm that detects images and compare it in a library thanks to a matrix for the matching. Here are some particularities:

- ❖ Images are already saved, so the matrix compare them to match the best with the one you show.
- ❖ The algorithm is filtering specific frame which is the litlest black square, it's also removing others from the environment.
- ❖ Here are the images we implemented :



# 3. Tutorial

In this video we will illustrate the main steps to realize the Poppy Body Motion Scenario:

1. Add the Body Motion Scenario in the 3DEXPERIENCE Platform,
2. Test one motion.

