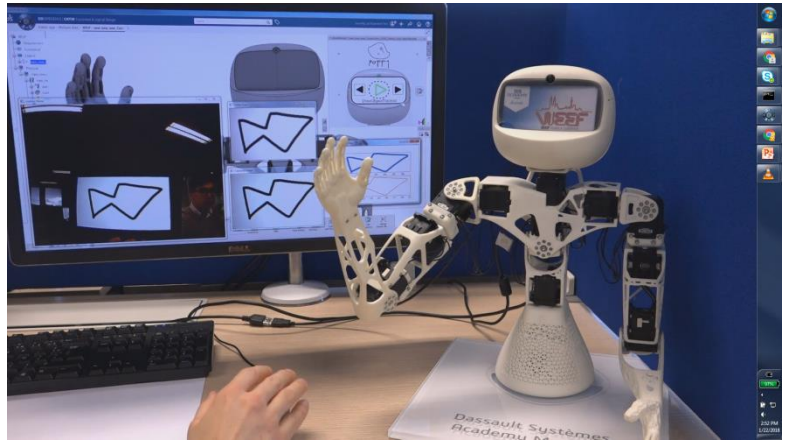




3DEXPERIENCE®

Learning Machine

Poppy Learning Machine



Activity Content

Available in "data library" tab

- ▶ 3DXML model
 - ▷ Poppy_Learning_Machine_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 system engineering and machine learning

► Prerequisites

- ▷ **Activity 4 | Digital Twin**
- ▷ Knowledges about Python
- ▷ CATIA Functional and Logical Design Fundamentals
- ▷ CATIA Dymola Behavior Modeling Essentials

► Upon completion you will be able to

- ▷ Create and teach poppy how to draw what you drawn.

► 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 :

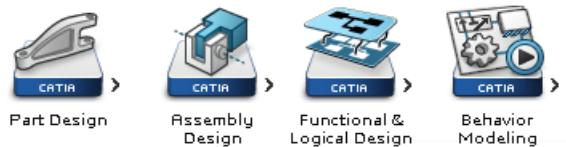
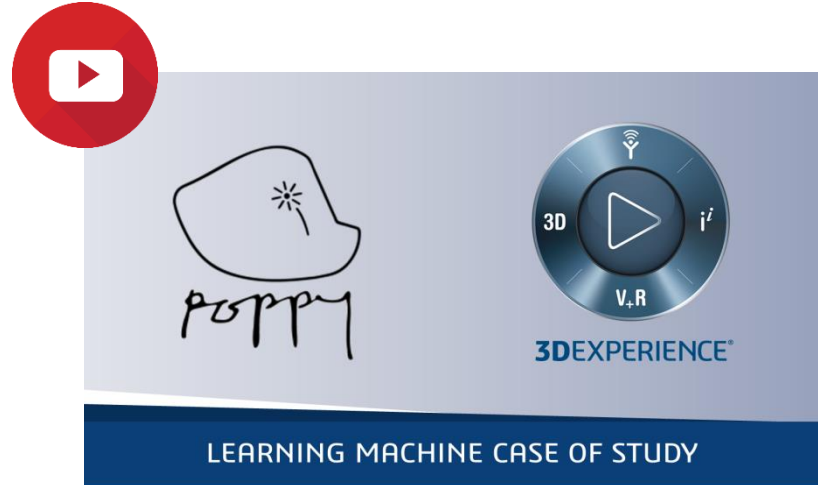


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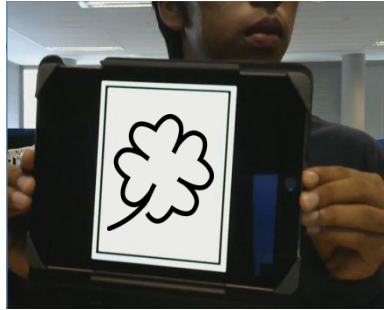
1. Case of Study
2. About learning machine
3. Tutorial

1. Case of Study : Poppy Learning Machine

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

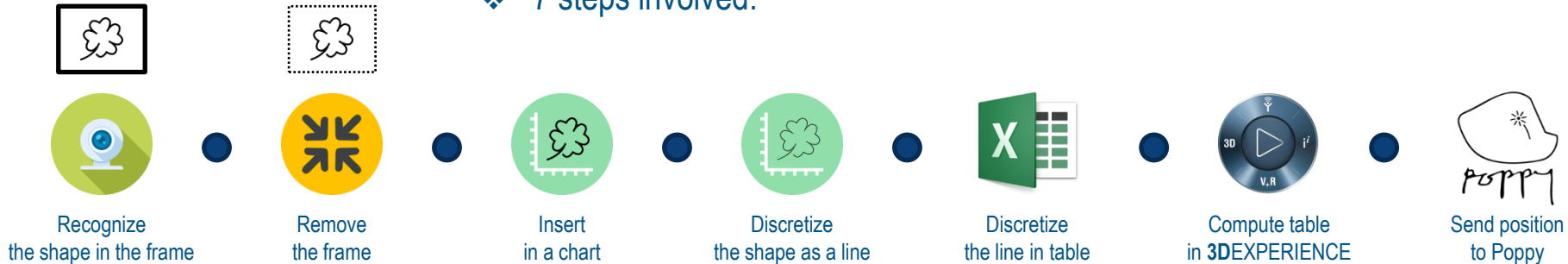


2. About the learning machine method used



Poppy camera captures your drawing inside a frame and interprets it as a curve in a chart, it send it to 3DEXPERIENCE which is able to drive the poppy to follow the computed line coming from your drawing:

- ❖ The drawing has to be completed without lines crossing
- ❖ The drawing will be computed by a machine, but be aware, if you create a closed shape the machine can start from anywhere.
- ❖ 7 steps involved:



3. Tutorial

In this video we will illustrate the main steps to realize the Poppy Learning Machine Scenario:

1. Create the Poppy Learning Machine Scenario in the 3DEXPERIENCE Platform,
2. Test one of your drawing.

