

# CogniSight SDK For MatLab

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CONNECTING MATLAB TO A  
NEUROMEM SILICON NETWORK FOR  
VISION APPLICATIONS

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## INTRODUCTION

The CogniSight SDK for MatLab is a wrapper for the CogniSight Dynamic Link Library which interfaces to a NeuroMem network for the learning and recognition of patterns derived from images and any data type.

The description of the CogniSight engine and its function library is therefore available in the [CogniSight SDK manual](#).

## INSTALLATION

Several versions of the DLL exist. They have the same entry points but are targeted at the following NeuroMem hardware platforms:

- CogniSight\_NSnK.dll, interfaces to the digital neurons of the NeuroStack board, or a stack of them, or a chain of simulated neurons with different capacity
- CogniSight\_Simu.dll, simulates networks of different capacity

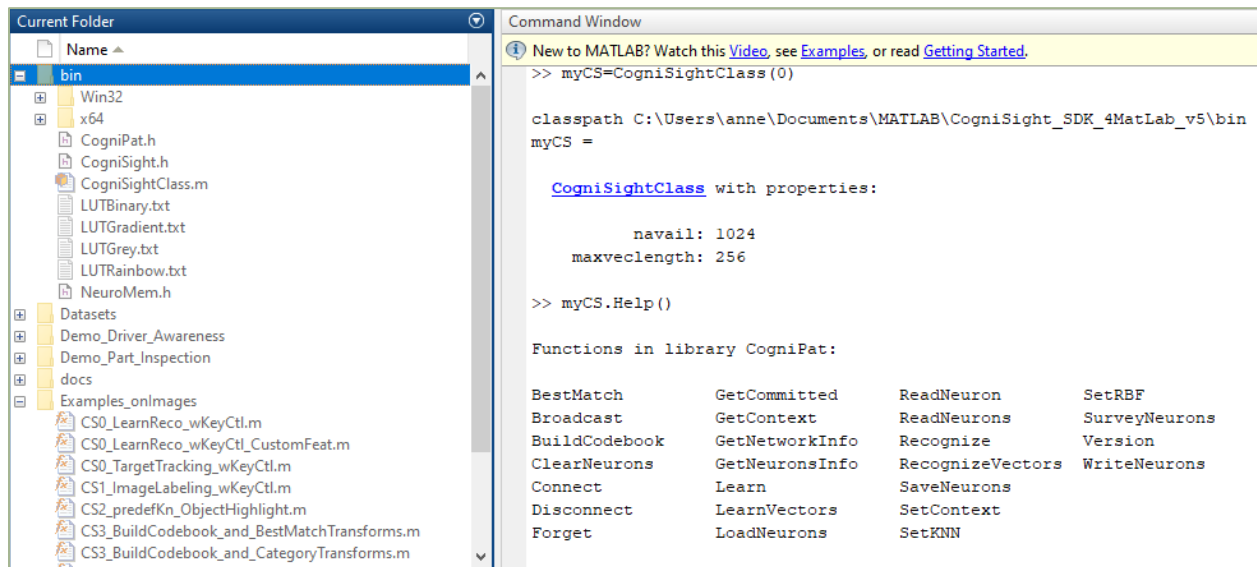
## CONTENTS

Copy the CogniSight\_SDK\_MatLab to the Document/MatLab folder

- Bin folder
  - o CogniSightClass.m, wrapper to access the functions of the CogniSight DLLs
  - o Header files
  - o DLLs dispatched among the Win32 and x64 sub-folders
- Examples
  - o Scripts calling the CogniSightClass which is expected in the Bin folder

## PROPERTIES AND METHODS OF THE CLASS

Detailed description of the function library is available at [CogniSight SDK Manual](#). Useful comments are also inserted in the \*.m files.



## EXAMPLES

- Demo\_Driver\_Awareness (use predefined knowledge)
- Demo\_Part\_Inspection (use predefined knowledge)
- Examples on images (user supervised training)

Warning: The examples supplied in the toolbox refer to paths locating folders of images, data and project files. Moving them around might cause some datapath to be broken.

### Example 1: CSO\_LearnReco\_wKeyCtl

- Use the cursor to move over a region of interest such as the upper tip of a wing as shown below. Type 1 to learn this region as a 1<sup>st</sup> category #1. It turns red which is the color tag assigned to category 1 in the initialization of the script.
- Use the cursor to move over a region of interest such as the lower tip of a wing as shown below. Type 2 to learn this region as a 2<sup>nd</sup> category #2. It turns green which is the color tag assigned to category 1 in the initialization of the script.

