

Using the Nao

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Installing software

The quickest and easiest way to start programming with the Nao is by using the Choregraphe software provided by Aldebaran.

1. Go to the Aldebaran github: <https://github.com/aldebaran/nao6-binaries>
2. Download the Choregraphe suite for the Nao for your operating system (win64 or linux64).¹
3. Install the version compatible with your OS.

Choregraphe

You can use Choregraphe with either a real robot or a simulation. To use a simulation connect to the localhost Nao you see in the connect tab. For using a real Nao you can take one from the lab and turn it on by pressing the chest button. It is possible that the robot does not have the Naoqi OS installed on it. To check if its compatible you can press the chest button after startup. If the robot starts talking it will be Choregraphe compatible, otherwise use a different robot or ask a teaching assistant for help.

If you have a robot ready you can connect it to your computer with an Ethernet cable. Check the connect tab to see if the robot is in the list. If the robot is in the list you can connect to it normally. If it is not you can press the chest button once. The robot should start to say its IP address which you can fill in in the "Use fixed IP/hostname" tab manually. If you happen to be using Linux you also need to switch your connection type to shared with other computers.

¹The latest version for Mac OS is `choregraphe-suite-2.8.7.4-mac64.tar.gz`, which is unfortunately not archived. Only the older version 2.1.4.13 for the Nao v5 is still available on <https://github.com/aldebaran/NAO-V5-ressources/tree/main/Choregraphe/Mac>.

After connecting with either the virtual or real Nao you can start programming the Nao in either Python or C++ using Choregraphe. In the tab Help - Getting Started... you can find guides for basic scripting you can do. I would suggest testing your programs (especially programs that include moving the robot) on the virtual robot before you start working with the real one.

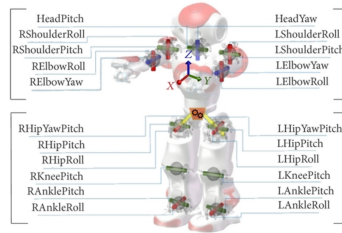


Figure 1: Joint overview of the Nao

Archived Aldebaran documentation

The usage of Choregraphe was documented by Aldebaran. The documentation is still available thanks to the Internet Archive, including:

1. What is Choregraphe?
2. Your first steps in Choregraphe
3. Other Choregraphe tutorials.
4. Scripting Python boxes

Further Reading

A more detailed introduction (in Dutch and for Nao v5 robots) is written in 2017 by Simon Pauw².

Acknowledgement

Based on a guide created by the teaching-assistants Thomas Groot *et al* for the course 'Search, Navigate, and Actuate' of the bachelor Artificial Intelligence at the University of Amsterdam.



² <https://staff.fnwi.uva.nl/a.visser/education/ZSB/Experiment/ZSBHandleidingNAO.pdf>