Getting started with Cozmo

What is Cozmo?

Cozmo is a small, intelligent robot developed by Anki that combines robotics, AI, and expressive personality to create an engaging interactive experience. Unlike a simple toy, Cozmo can recognize faces, play games, explore its environment, and respond to user input with a lively personality. It's designed to be both fun and educational—an ideal platform for learning about coding, robotics, and artificial intelligence.

What comes with the robot?

If you choose to use Cozmo, you will be given access to a box containing:

- 1 Cozmo
- 1 Charging Dock
- 3 Interactive Cube
- 1 Router (shared by all Robots)

All equipment underwent thorough testing and verification prior to its availability to students. Kindly exercise caution and ensure the return of each item enclosed in the box in the same condition as it was borrowed.

What can Cozmo do?

Vector has the following hardware components:

- **Camera**: Used for facial recognition, navigation, and object detection.
- **OLED display**: Displays Cozmo's expressive eyes.
- **Lift and arm motors**: Enable movement and interaction with the cubes.
- **Treaded wheels**: Allow Cozmo to move freely on flat surfaces.
- **Speaker and microphone**: Allow Cozmo to produce sounds and respond to voice.
- **Sensors**: Detect distance, obstacles, and cube locations.
- **Wi-Fi connectivity**: Used for communication with a controlling device or computer.

How can I program Vector?

The original Cozmo software was discontinued when Anki shut down. However, you can still program Cozmo using **PyCozmo**, a community-developed open-source library that replicates and extends Cozmo's SDK functionalities.

After completing the setup steps below, you can explore and run the example code and tutorials provided by the PyCozmo developers: **Tutorials**

Enviroment Setup

1. Create a virtual environment:

   ```
   python -m venv venv
   ```

2. Activate the environment (Windows example):

   ```
   venv\Scripts\activate
   ```

3. Install the Communication Library**:**

   ```
   pip install pycozmo
   ```

4. Download Cozmo Resources:

   ```
   cd venv/Scripts
   pycozmo_resources.py download
   ```

Connect your Computer to Cozmo

- Turn Cozmo on by pressing and holding the button on the robot for a few seconds.
- A **Wi-Fi network name and password** will appear on Cozmo's screen.
- On your computer, open the Wi-Fi settings and connect to Cozmo's network using the password displayed.
- Once connected, Cozmo and your computer will be able to communicate directly.

Now you're ready to start programming Cozmo and exploring its capabilities!

Further documentation and guides:

- PyCozmo