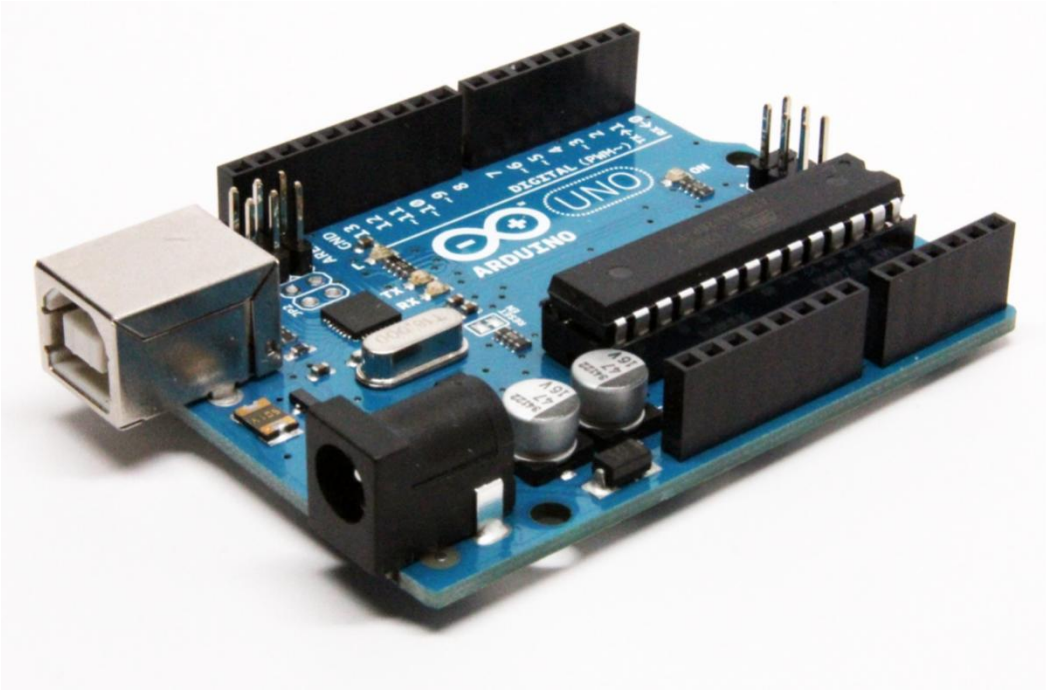
ARDUINO

What is Arduino?

ARDUINO is an open-source electronics platform, it means that is accessible for everyone. You can image ARDUINO as a little computer which executes three main actions:

- **reading an input** – it is able to read electrical signals which enter ARDUINO from sensors (for example a temperature sensor or a button)
- **elaborating data** –after it reads an electrical signal, it can recognise the kind of input and transform it into a coded instruction
- **producing an output** – it can emit electrical signals for external devices (for example motors, LEDs, displays, and others)



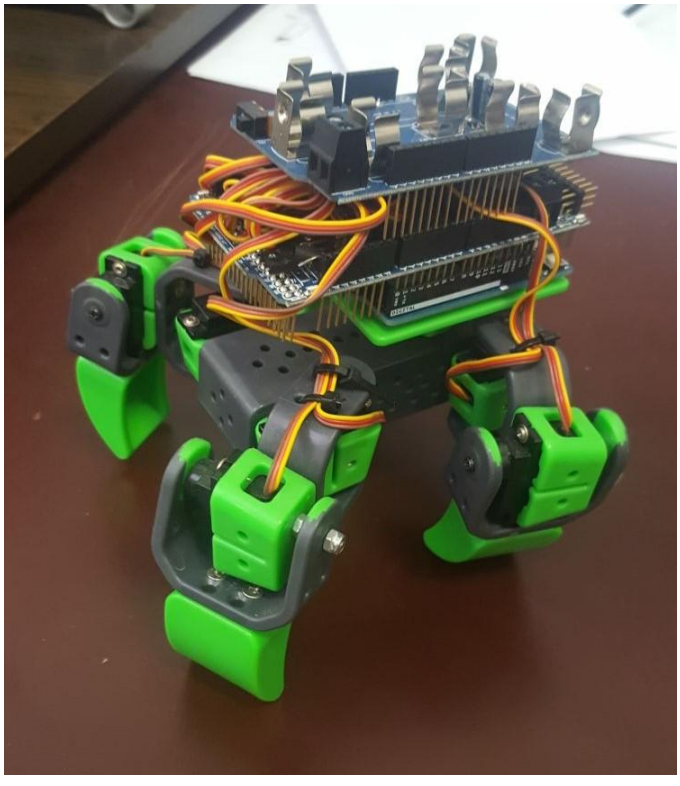
Where was Arduino born?

ARDUINO was born at the IVREA Interaction Design Institute, in Italy, as an easy tool for fast prototyping, aimed at students without a background in electronics and programming. As soon as it reached a wider community, the ARDUINO board started changing to adapt to new needs and challenges.

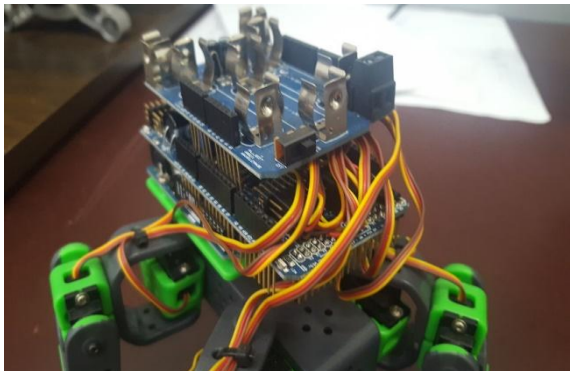
Why Arduino?

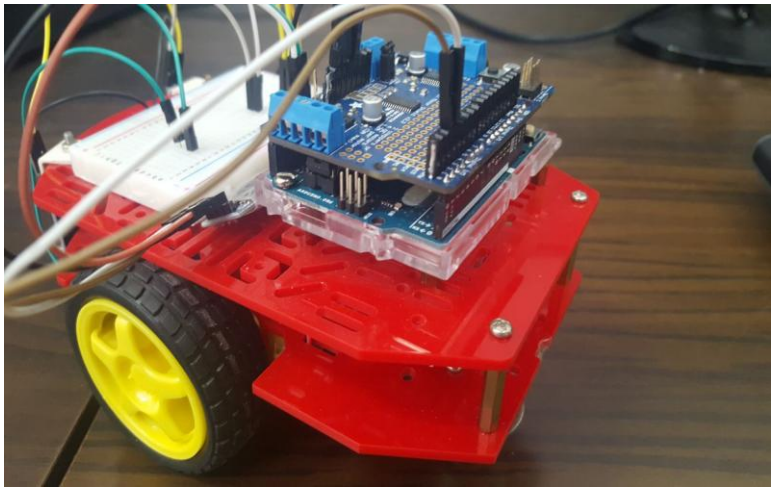
Thanks to its simple and accessible user experience, ARDUINO has been used in thousands of different projects and applications. The ARDUINO software is easy-to-use for beginners, yet flexible enough for advanced users. Teachers and students use it to build low cost scientific instruments, to prove chemistry and physics principles, or to get started with programming and robotics. Designers and architects build interactive prototypes, musicians and artists use it for installations and to experiment with new musical instruments. Makers, of course, use it to build many of the projects exhibited at the Maker Faire in Rome, for example.

Our projects with Arduino



The students of our school have designed a robot which looks like a spider and it is controlled by ARDUINO.





This small car is controlled by the Bluetooth in your smartphone. How does it work?

You can use your mobile phone as a joystick, for every command it sends a different signal to a sensor connected to ARDUINO, then it reads the input and moves the motors, one for each wheel.