

# Realisation and conception an autonomous robot with



# Arduino UNO



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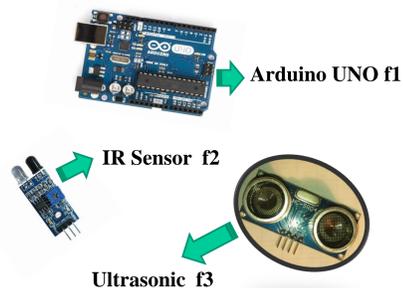
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## Abstract

In this paper we are talking about an autonomous robot with an Arduino UNO. We try to get results in our project, realization and conception of a robot that can skip an obstacle using ultrasonic and three IR sensors and two motors, breadboard jumper cables, resistances, diodes, etc. All these components are part of our robot design. [1]



**keywords:** Arduino UNO, Breadboard, IR sensor, jumper, diode.

## 1. Introduction

It was in the year 2005 that the first ever Arduino board was born in the classrooms of the Interactive Design Institute in Ivrea, Italy. Well, if you are not very familiar with the term, an Arduino is an open source microcontroller based development board that has opened the doors of electronics to a number of designers and creative engineers. [1.1]

Arduino is a tool for making computers that can sense and control more of the physical world than your desktop computer. It's an open-source physical computing platform based on a simple microcontroller board, and a development environment for writing software for the board. [1.2]

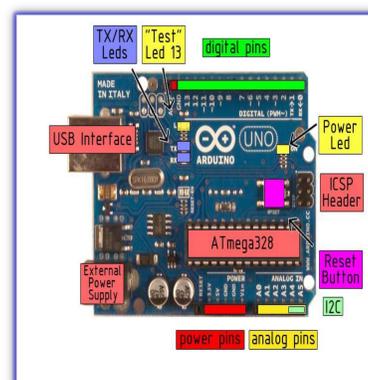


**Arduino developer team :**  
David Cuartielles, Gianluca Martino, Tom Igoe, David Mellis, and Massimo Banzi.

Photo Courtesy - Randi Klett/IEEE Spectrum. [1.1]

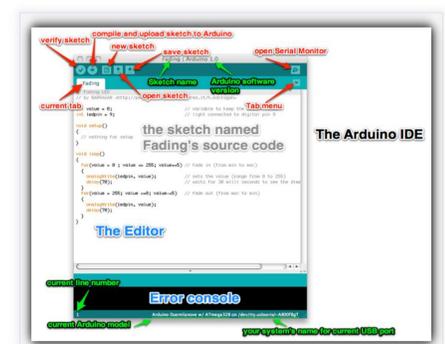
## 2. Preliminaries

The Arduino Uno is a microcontroller board based on the ATmega328. It has 14 digital input/output pins (of which 6 can be used as PWM outputs), 6 analog inputs, a 16 MHz ceramic resonator, a USB connection, a power jack, an ICSP header, and a reset button. It contains everything needed to support the microcontroller; simply connect it to a computer with a USB cable or power it with a AC-to-DC adapter or battery to get started. [2.1]



### Technical Specification of the Board Arduino UNO [2.2]

The Arduino Uno can be programmed with the Arduino software (IDE). Select "Arduino Uno w/ ATmega328" from the Tools > Board menu (according to the microcontroller on your board). [2.2]

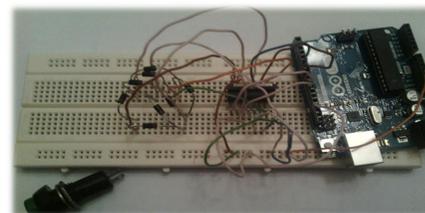


### Interface Of IDE Arduino f4

The open-source Arduino Software (IDE) makes it easy to write code and upload it to the board. It runs on Windows, Mac OS X, and Linux. The environment is written in Java and based on Processing and other open-source software. This software can be used with any Arduino board. [2.3]

## 3. Statement of the results

Until now we get some results. We start by buying the materials, then we program in the first a ultrasonic sensor, second we assemble a circuit of module 298N with breadboard and Arduino Uno, and we will program that and with motors to get a robot that can skip an obstacle. [2]



this tests about our project ultrasonic and bread board with module 298N and Arduino UNO [3]

## References

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- [1.2] <http://arduino.cc/en/Guide/Introduction>
- [2.1] <http://arduino.cc/en/Main/arduinoBoardUno>
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- [2.3] <http://arduino.cc/en/main/software>