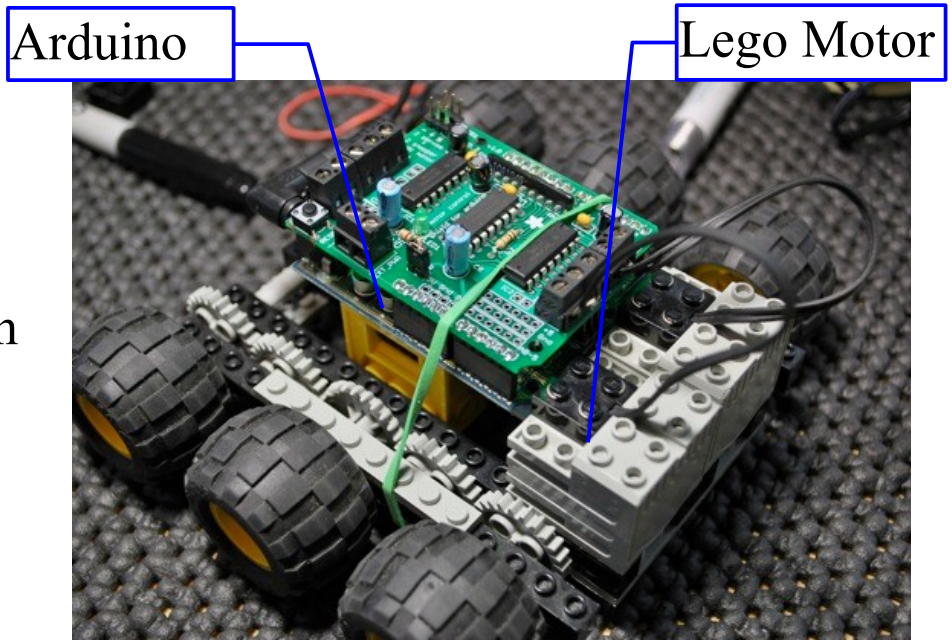
Making a Motor Move



1. Create the circuit shown on last page
2. Open the Arduino IDE program on your computer
3. In the menu at the top of the arduino program go to
   File → Examples → 03.Analog → Fading
4. Upload code to arduino
5. One Motor should speed up and slow down
6. Change Code so both motors move.
   HINT: You need to use the command `analogWrite(ledPin2, fadeValue)` and create a new variable ledPin2 with value 10 `int ledPin2 = 10;`

Extensions

1. Use a sensor of your choice (for example a potentiometer) connect it up and use it to control the speed of the motor

Program Code (File → Examples → 03.Analog → Fading)

```
int ledPin = 9;    // Motor connected to digital pin 9

void setup()  {
  // nothing happens in setup
}

void loop()  {
  // fade in from min to max in increments of 5 points:
  for(int fadeValue = 0 ; fadeValue <= 255; fadeValue +=5) {
    // sets the value (range from 0 to 255):
    analogWrite(ledPin, fadeValue);
    // wait for 30 milliseconds to see the dimming effect
    delay(30);
  }

  // fade out from max to min in increments of 5 points:
  for(int fadeValue = 255 ; fadeValue >= 0; fadeValue -=5) {
    // sets the value (range from 0 to 255):
    analogWrite(ledPin, fadeValue);
    // wait for 30 milliseconds to see the dimming effect
    delay(30);
  }
}
```

Circuit Diagram