The Canadian Satellite Design Challenge Management Society presents…

The CanSat Kit for DUMMIES

Future Space Scientists & Engineers!

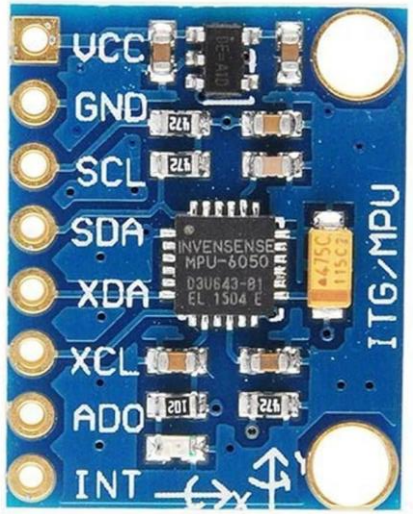
Episode #6: Connecting the MPU-6050 Accelerometer & Gyroscope

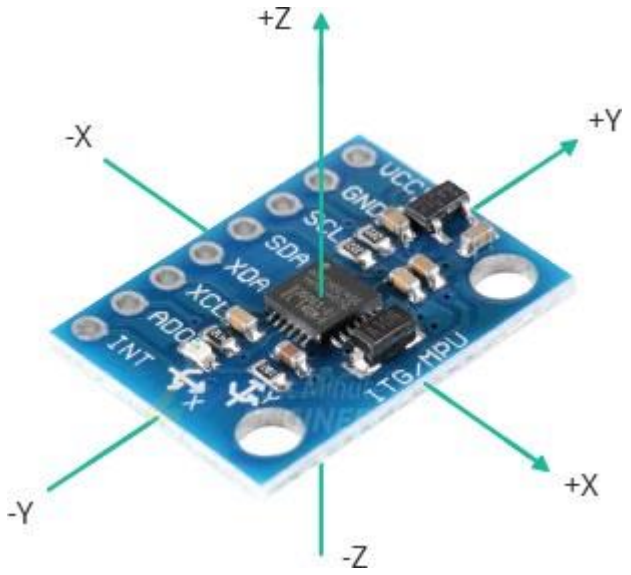
What we’re going to do:

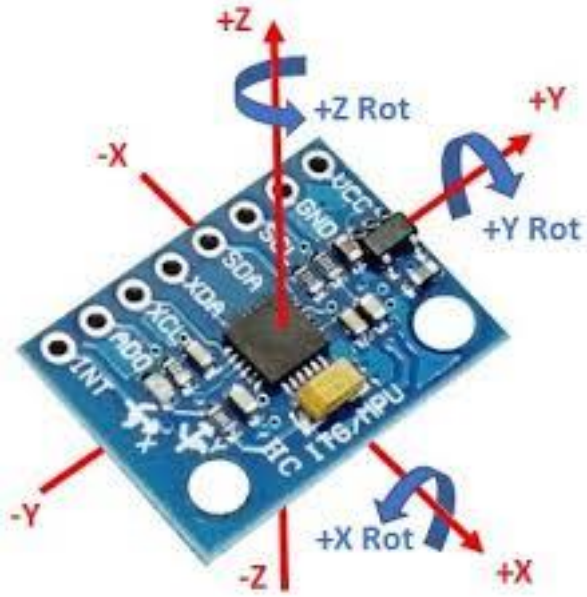
- Connect the MPU-6050 Accelerometer and Gyroscope
  - Read the acceleration in each axis (X, Y, Z)
  - Read the rotation rate around each axis (X, Y, Z)
  - Optional: it has a temperature sensor also!

The MPU-6050

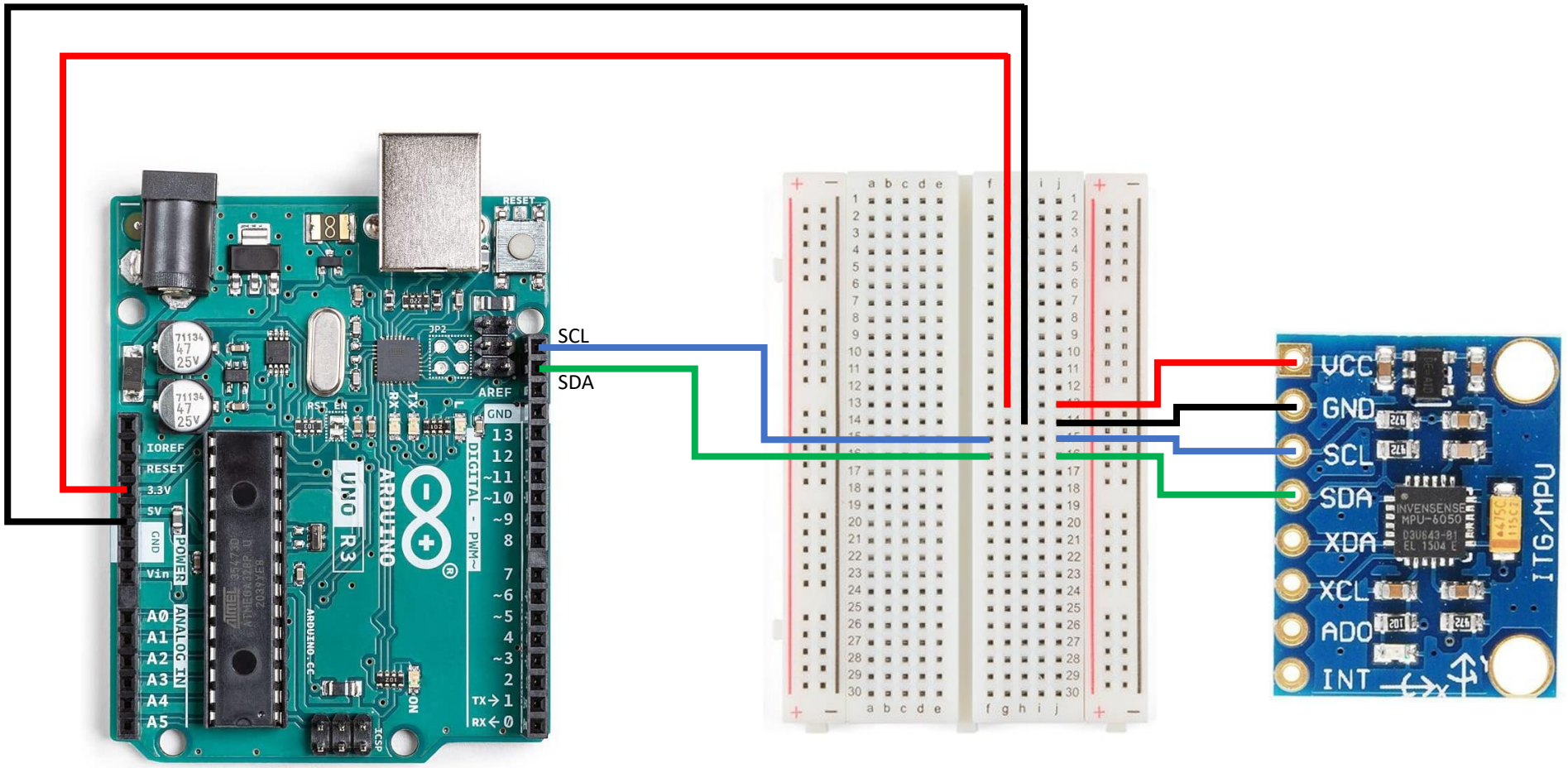
- Measures acceleration up to ±16g
- Measures angular rotation rates up to ±2000 deg/s



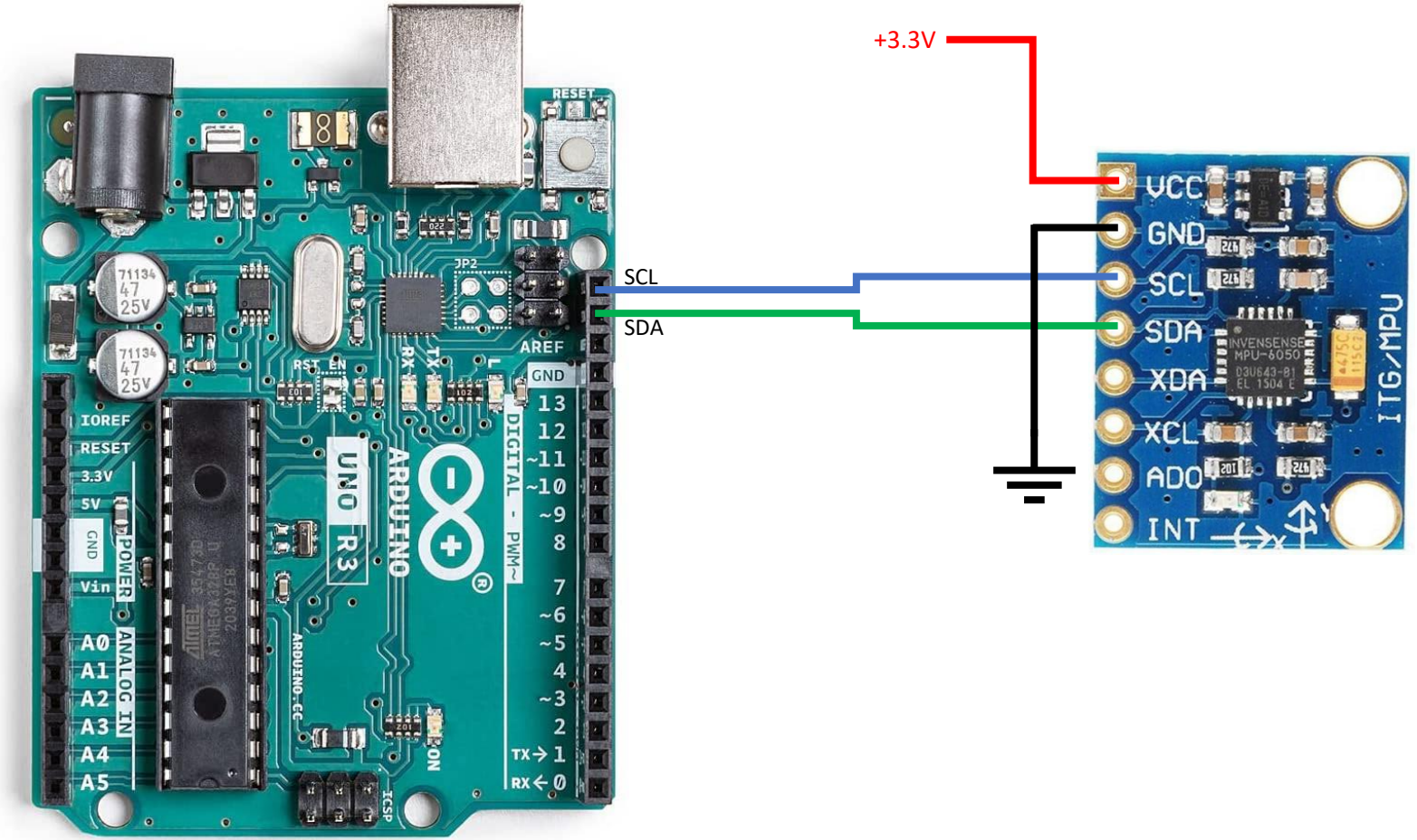




MPU-6050 Circuit Diagram

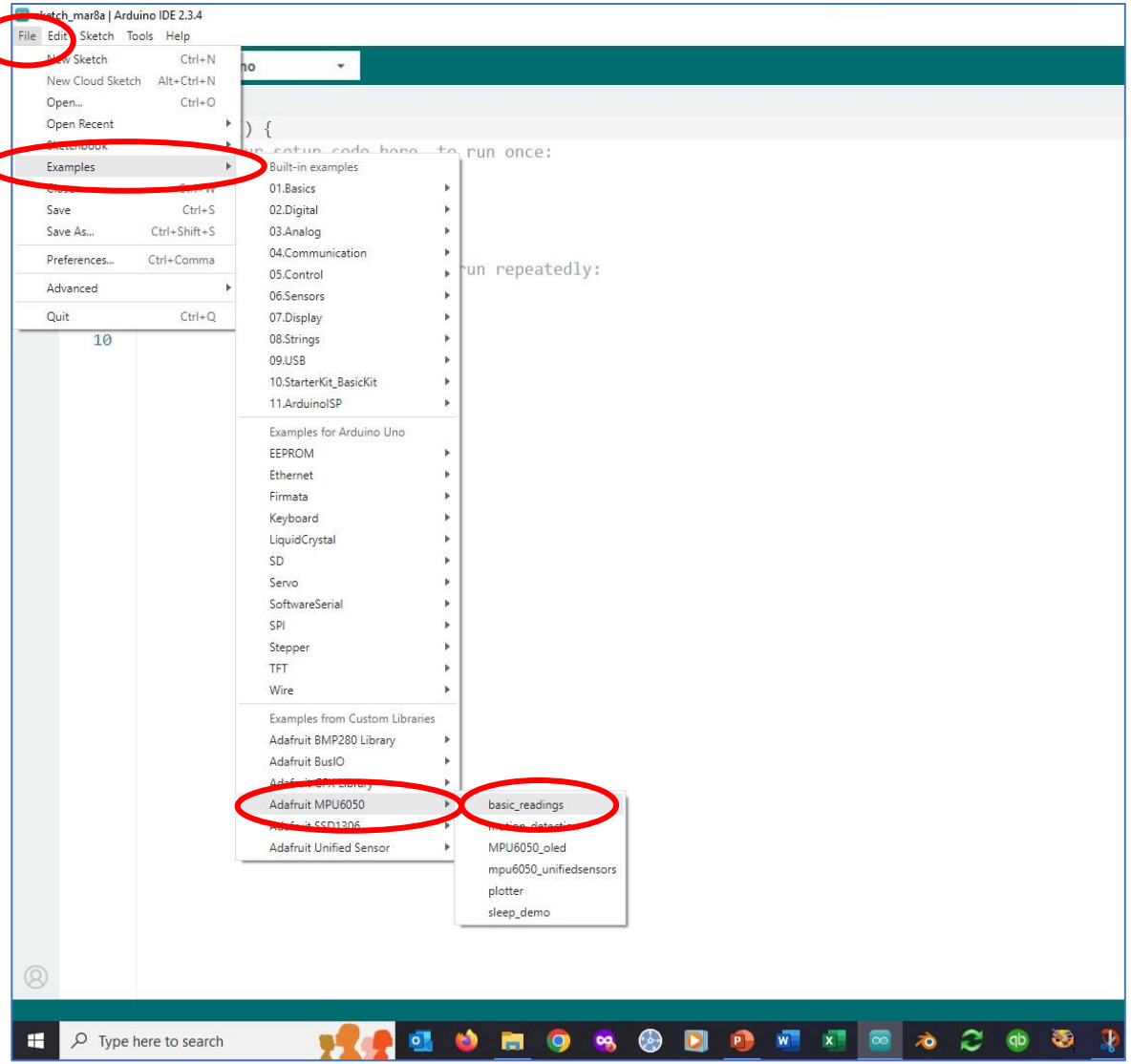


or simply…


+3.3V
SCL
SDA
VCC
GND
SCL
SDA
XDA
XCL
ADO
INT
ITG/MPU
INVENSENSE
MPU-6050
RESET
AREF
GND
13
12
~11
~10
~9
8
7
~6
~5
4
~3
2
TX→1
RX←0
DIGITAL - PWM~
IOREF
RESET
3.3V
5V
GND
Vin
POWER
A0
A1
A2
A3
A4
A5
ANALOG IN
UNO R3
ARDUINO

Load the Example MPU Program

File -> Examples -> Adafruit MPU6050 -> basic_readings



Compile and Upload … et voila!