very basic pan tilt using arduino

by **katman101** on August 27, 2013

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Intro: Very basic pan tilt using arduino

for this instructable you will be learning the basics of arduino and codes for arduino.

video of pan/tilt arduino project (careful, this video contains aweful impressions of batman)

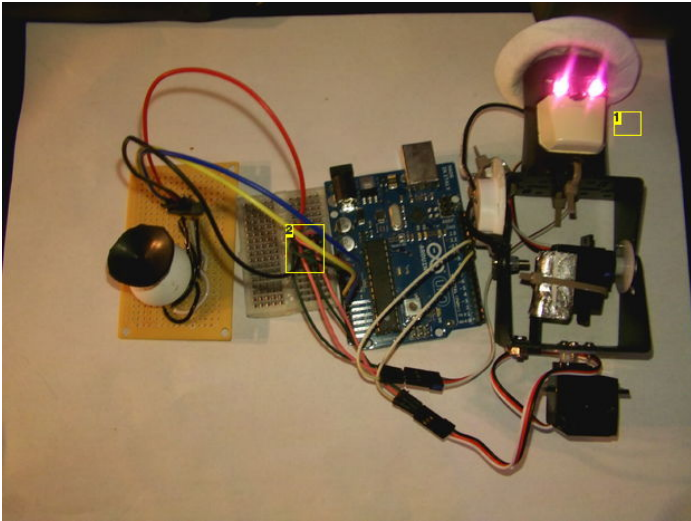**if anybody wants me to put up more photos on this project please message me.**

Image Notes
1. "I'M BATMAN!!!"
2. tangled mess of positive and negative wires

Step 1: Supplies and wiring

things you will need:

-2 sub-micro servo motors

-one pan/tilt bracket

-various jumper wires

-mini breadboard

-joystick

-arduino

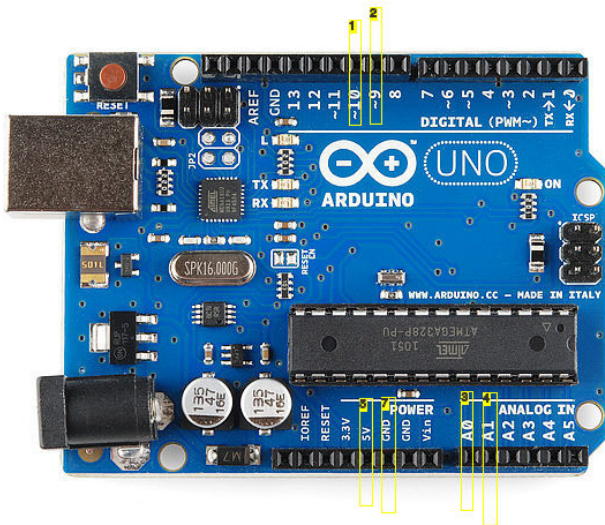-(optional) batman's head, two LEDs, and a tiny hat

Image Notes
1. data wire to top servo goes here
2. data wire to bottom servo goes here
3. y axis data pin goes here
4. x axis data pin goes here
5. this needs to be connected all the positive leads, breadboard reccomended
6. this photo belongs to sparkfun
arduino uno, supertasty.
7. this needs to be connected all the negative leads, breadboard reccomended

Step 2: Description of wiring

i don't have any photos for this process but i will make some if i am asked enough.

wire the data wire of the **bottom servo** to **pinhole ~9** and wire the data wire of the **top servo** to **pinhole ~10** , the data wire is usually the white or yellow wire of the servo.

the **y axis** pin of the joystick goes to **A0** , **x axis** pin goes to **A1**

for powering everything connect **all positives** to the **5V** pinhole on the arduino and **all negatives** to the **GND** pinhole on the arduino, i used a mini breadboard for this
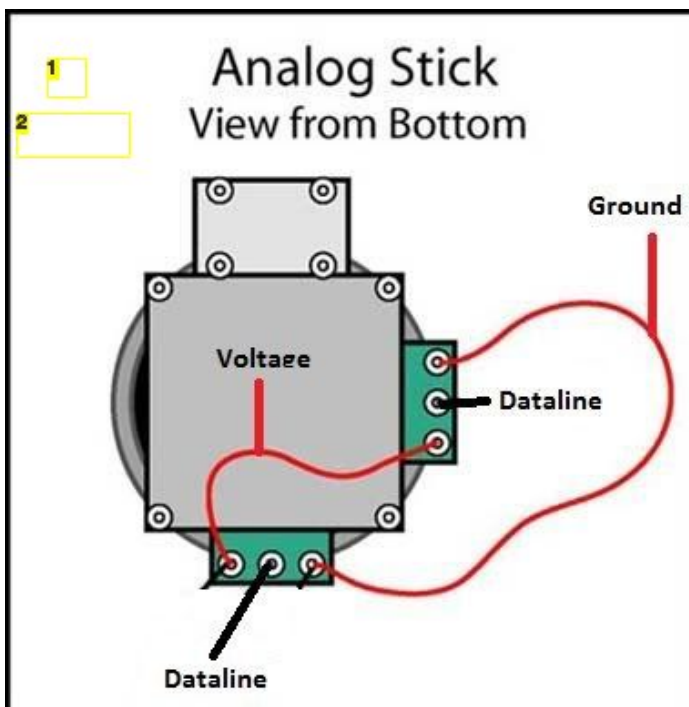
Step 3: CODE

below is code for the arduino, i suggest using this stuff if you want your cool new pan/tilt machine to work!

code:

```
// Controlling two servos positions using two potentiometers or a joystick
// modified knob example by kevin jones original code by Michal Rinott

#include

Servo myservo0; // create servo object to control a servo
Servo myservo1;

int potpin0 = 0; // analog pin used to connect the potentiometer
int potpin1 = 1;
int val; // variable to read the value from the analog pin

void setup()
{
myservo0.attach(9); // attaches servo to pin 9
myservo1.attach(10); // attaches the servo on pin 10 to the servo object
}

void loop()
{
val = analogRead(potpin0); // reads the value of the potentiometer (value between 0 and 1023)
val = map(val, 0, 1023, 0, 179); // scale it to use it with the servo (value between 0 and 180)
myservo0.write(val); // sets the servo position according to the scaled value
delay(25); // waits for the servo to get there
val = analogRead(potpin1); // bananas are high in potassium
val = map(val, 0, 1023, 0, 179); //
myservo1.write(val); //
delay(25); //
}
```
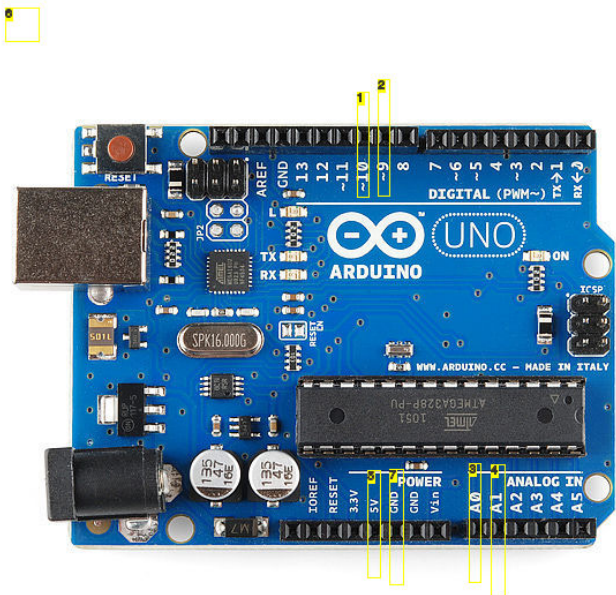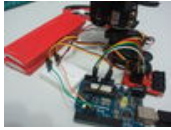

Image Notes
1. tomatoes.

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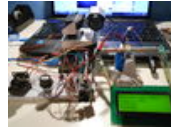
Related Instructables

Arduino Servo Dual Mode Control - Pan/Tilt with Joystick (video) by c0ffeepowder

Pan Tilt camera with Arduino and Joystick (Photos) by Federico Vendramin

Remote controlled webcam using Arduino, SensorMonkey, jQuery and Justin.tv by amccoy6

Joystick controlled Camera by markie

Arduino Labyrinth by tripletray

Servo Pod by andreq