Claw Bot Build Instructions

---

* Follow pictures if help is needed.

- Follow the layout as for all parts needed excluding (solder,wire,etc…)

Feet

- (2X) Mount a 4 piece 90* bracket ,with the holes on the outside, onto a 4 width rectangular piece, sitting slightly back so you only need one screw.

Base

- (2X) Create your "pillars" by combining two dominoes and two u-bends
- (2X) Then Mount to your feet as far back as possible with your pillar hanging off towards the other foot
- Then take your long off set 3 hole piece (length varies on robot) and mount to the underside of your pillars connecting your feet
- (2X) Mount your servo on the beam connecting your feet 3 hole spaces from your pillar
- Then place your second beam on top of your pillars and secure
- Lastly Fasten your servos down to your top beam

Ping Sensor

- Take a dominos and mount it ,with the two holes in the middle, to a 4 hole 90* piece

Claw

- (2X) Take two dominoes and combine them with two parallelogram pieces with the triangle hole closest to the base and tip
- (2X) Attach your newly made claw to the servo with the two top most holes(bots POV) of the base of the claw

Electronics Mounting

- (Optional) hot glue the edges of your arduino to a 4 width rectangular piece with 4 holes hanging off for attaching
- Glue your ping sensor to the domino in the middle of your servos
- On the back left glue your battery box (we used a 4x AA)
- On top of your battery box mount your switch
- Beside your battery box attach your arduino to the right most servo. If you didn't put a meccano piece on your arduino then attach how you see fit.

Electronics Wiring

- Wire your switch to your battery box (we have a double pole single throw so we cut both ground and power with our switch)

- Daisy chain your servos

- You can either wrap your wires around your base to tidy up or you can also zip tie them up to make a neat build

- Next you will need a

    - 4 pin female header

    - 4 pin male headers

    - (2x) 3 pin male headers

- Next wire your output leads(If not already done so) and with them to your arduino (use the holes in the meccano pieces to keep it tidy)

- Finally Wire to the pins as described.

    - (Batt+) —> (Vin)

    - (Servo+) —> (5v)

    - (Ping Vcc) —> (5v)

    - (Batt-) —> (Ground)

    - (Ping GND) —> (Ground)

    - (Servo GND) —> (Ground)

    - (Ping Trig) —> (Digital 3)

    - (Ping Echo) —> (Digital 4)

    - (Servo Data) —> (Digital 5)