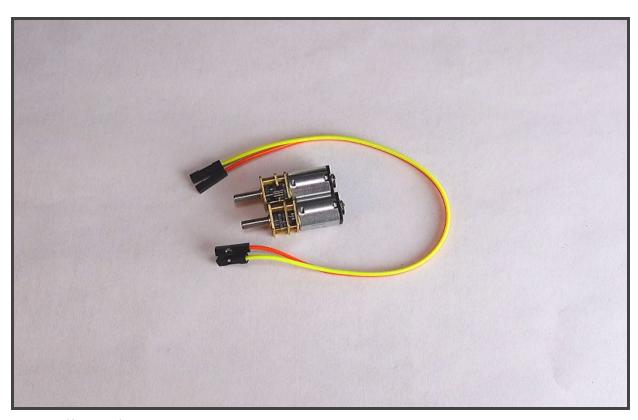
ProtoBot Motor Soldering Guide



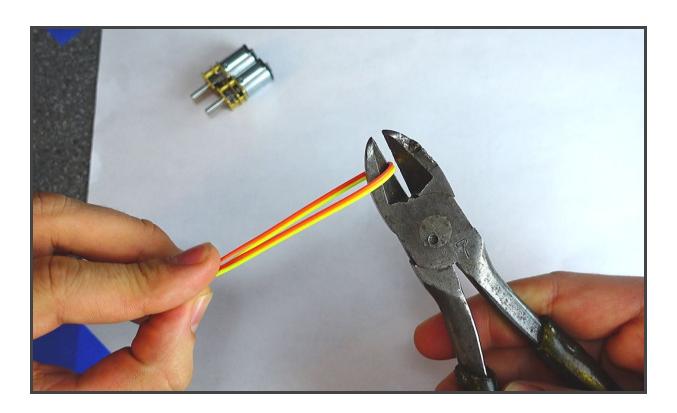
You will need:

Parts:

- 2 x N20 Gear motors
- 1 set of two DuPont Female-Female jumper wires

Tools:

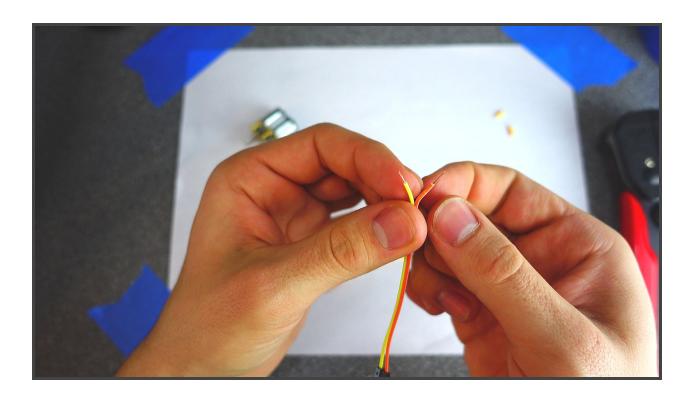
- Wire cutters/Strippers
- Soldering Iron with Fine tip
- Helping Hands, or something to hold the motors in place. (I used foam and tape)
- Hot Glue gun with Glue (High-Temp preferable)



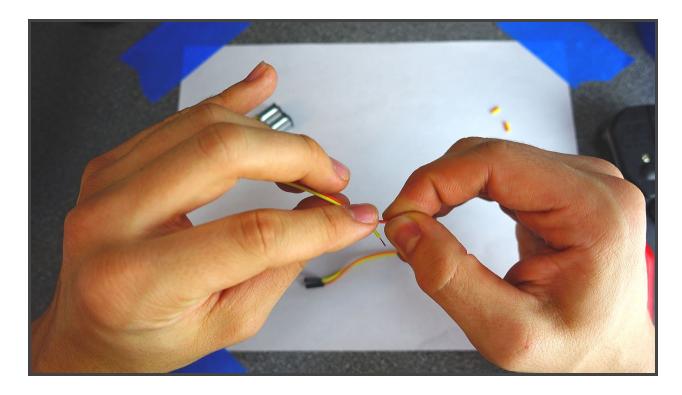
• Take your pair of wires, and cut them in half down the middle



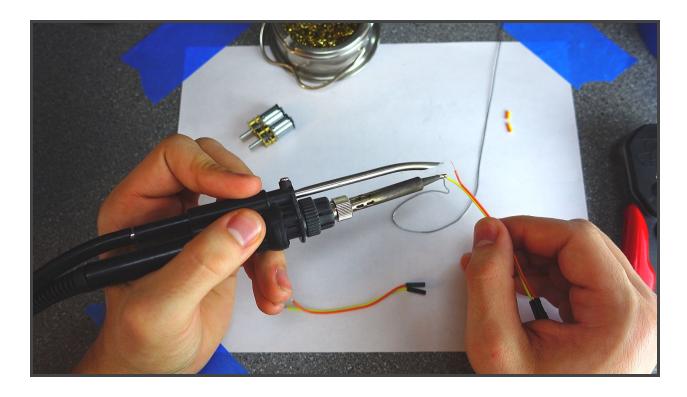
• Use your wire cutters to strip about 5MM or 1/4" off the ends of each set



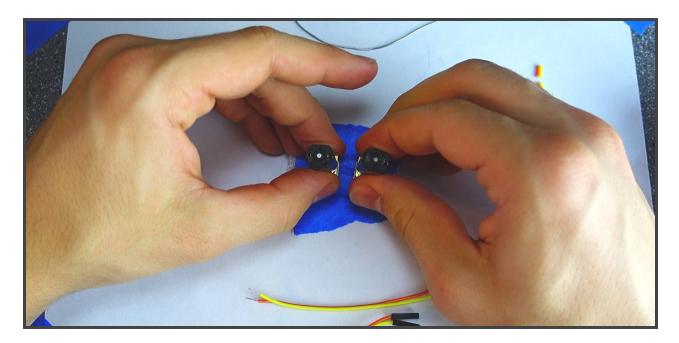
Split the ends apart



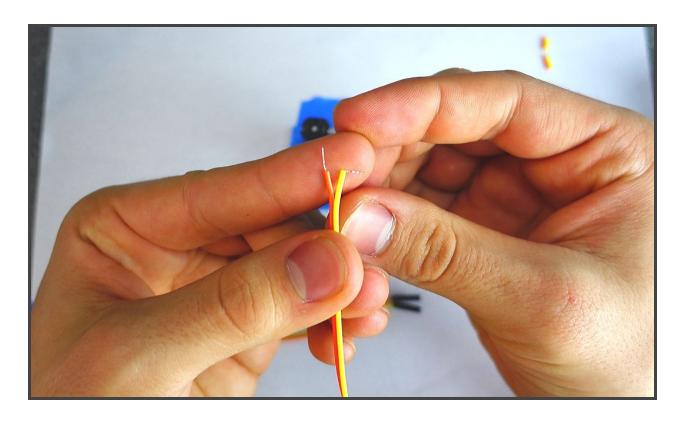
• Twist the strands of each wire end together, so that they stay tidy



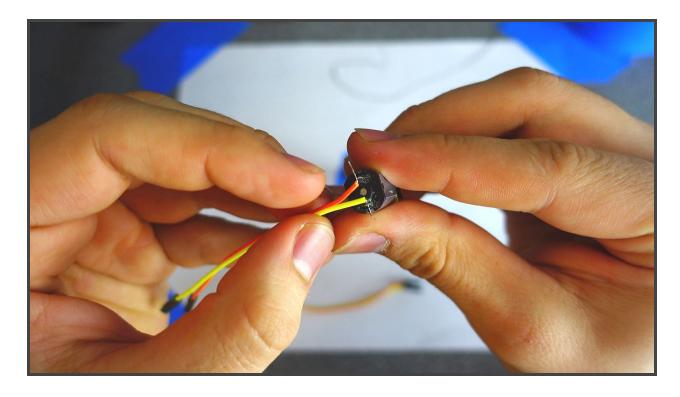
• Tin each wire end, by holding them on top of the solder, then applying your iron's tip



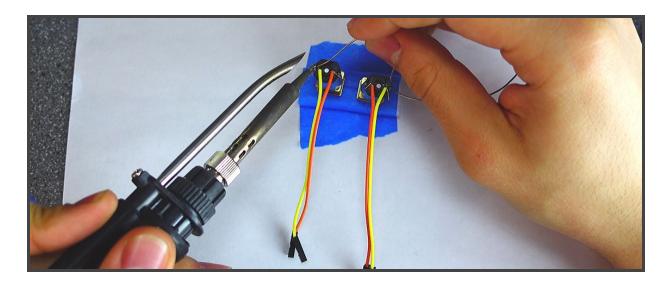
• Secure the motors somehow. I used a piece of foam with tape to hold it in place.



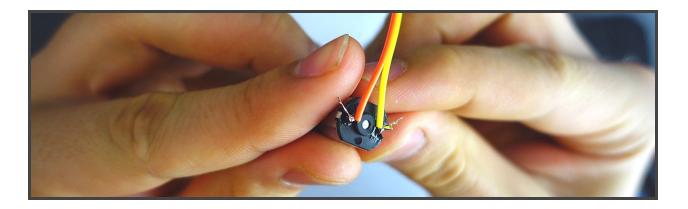
Bend the wire ends at a 90 degree angle, so that they're 180 degrees apart



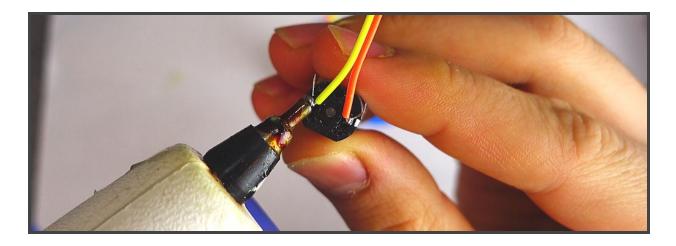
• Insert the wire ends into the holes in the metal connection tabs on the motors



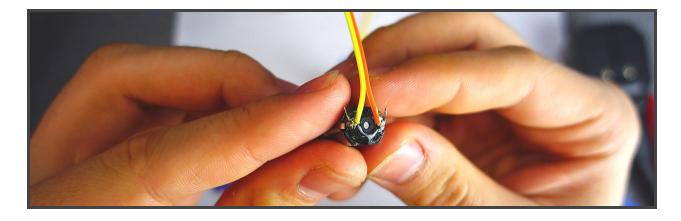
• Solder the wires to the motors



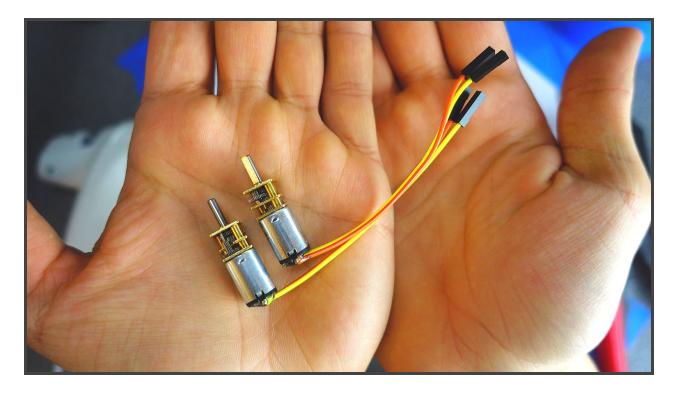
• When you're done, each motor should look like this



• Use your hot glue gun to put a generous dab of hot glue on each joint



• When you're done, each motor should look like this



Your motors are now ready to be used on a Protobot!