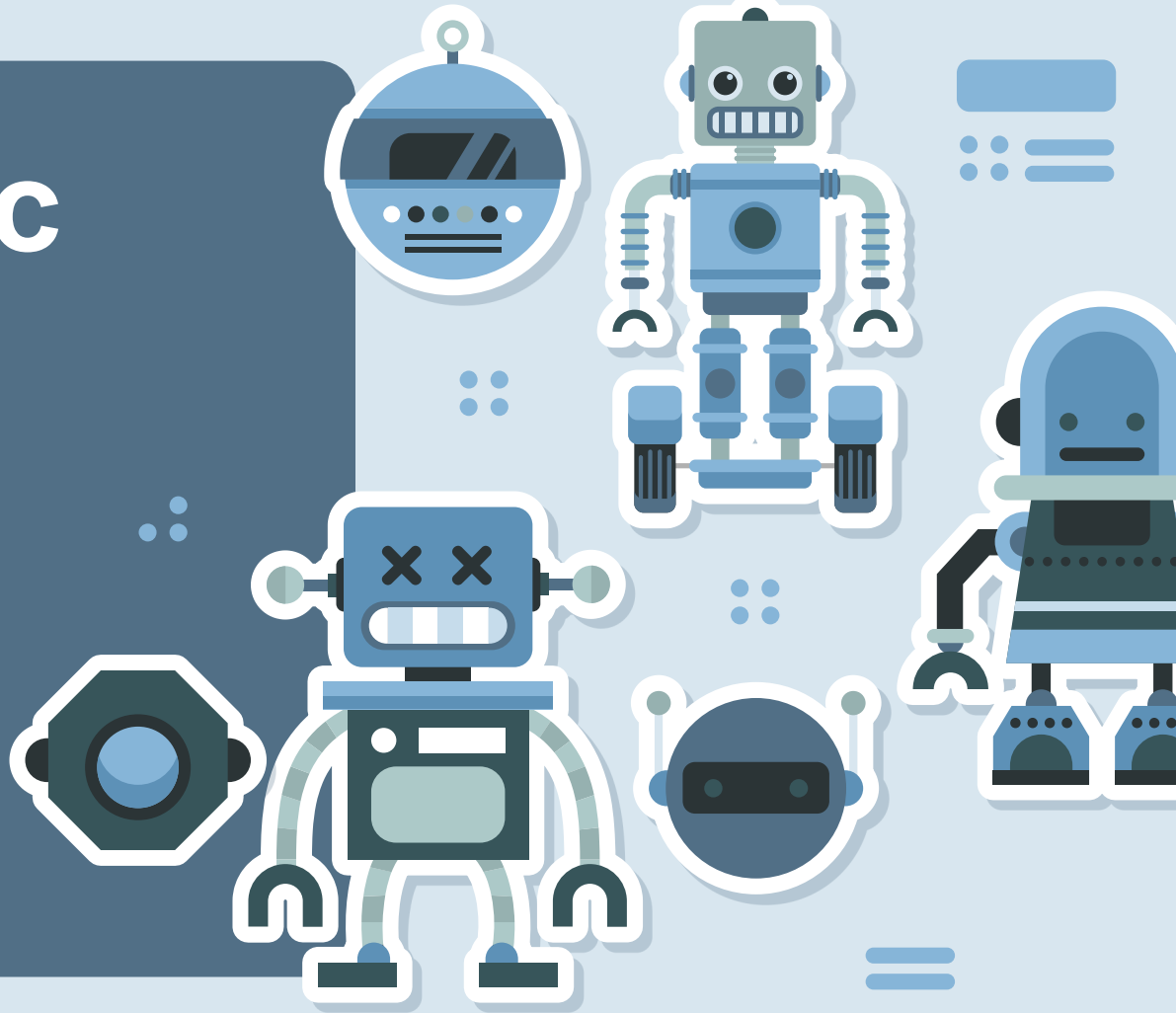


The Sonic Bat

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Issue

Many visually impaired people have an extreme passion for sports but face immense difficulties to do so due to their condition. We have decided to aid the visually impaired by creating a device that would make it a lot more easy for them to play cricket.



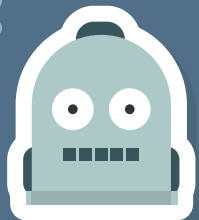


Our Perspective

Due to all our our team members' love for sports, we have decided to create a cricket bat that would help visually impaired people play cricket. We have chosen the sport cricket as it is the most popular sport in our country.



Project Goal

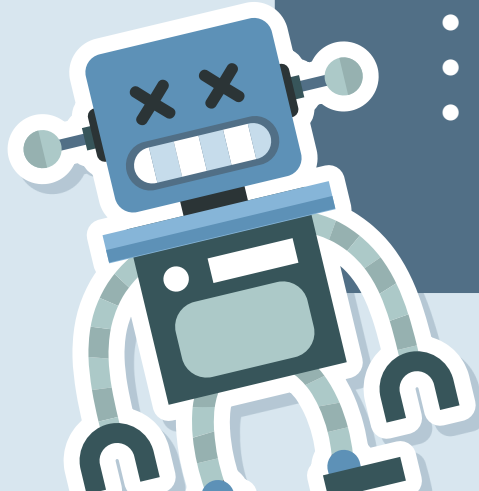
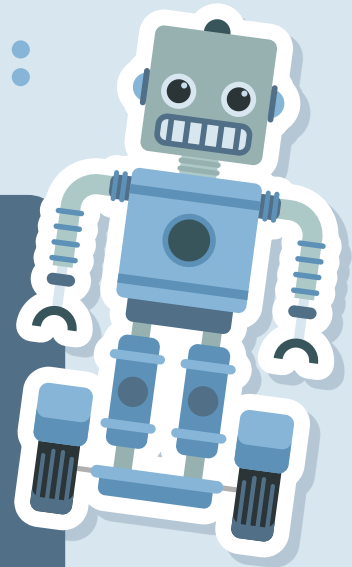
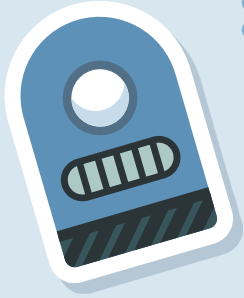


Our goal is to aid visually impaired individuals to experience playing cricket like anybody else. We want to work towards helping the visually impaired to be treated like anybody else, and not let them be belittled.



Materials Used

- ESP32 Microcontroller
- LIDAR(Light Detection and Ranging) Sensors
- Vibrating motors
- Powerbank
- Cricket bat
- 3D Printed stand for the components needed to be places on the cricket bat
- 3D Printed stand to hold the ESP32 on the users neck
- Wires
- Soldering wire and iron

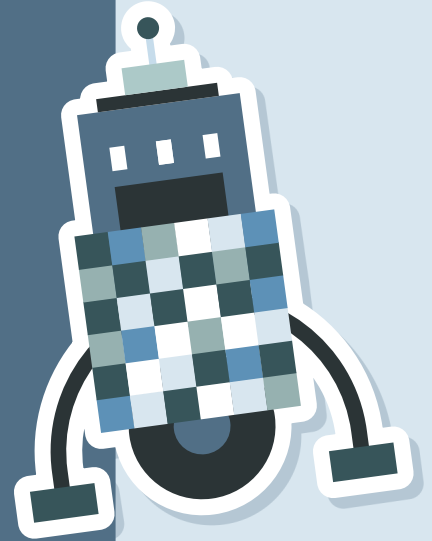


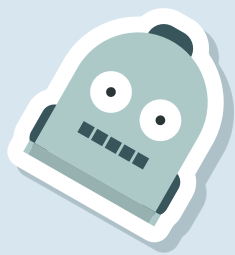
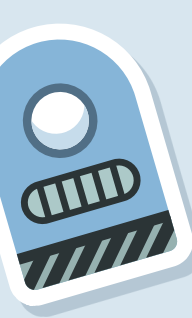




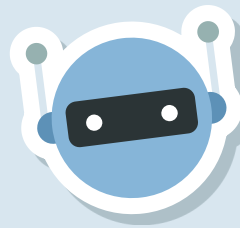
How Our Project Works

Our device uses a LIDAR sensor to track the direction in which the ball is approaching from and its distance from the batsman. The lidar sensor is connected to an ESP32, which is connected to 3 vibration motors on the user's neck. These vibration motors would indicate the direction that the ball is coming from and when to swing the bat.





Timeline



Day 1

We arranged all of our components.

Day 2

Started planning our project.

Day 3

Worked on the 3D printed stand on the bat and made circuits online.

Day 4

Worked on the 3D printed stand and soldered the components together. We also started working on the code.

Day 5

Assembled the stand on the bat, worked on the code, and soldered some wires together

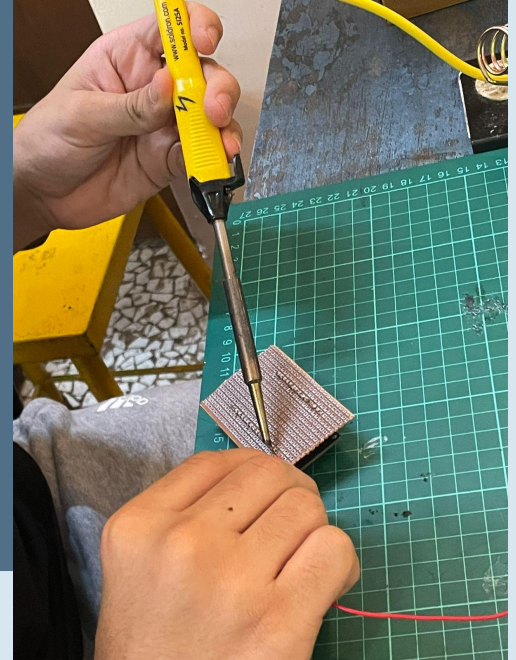
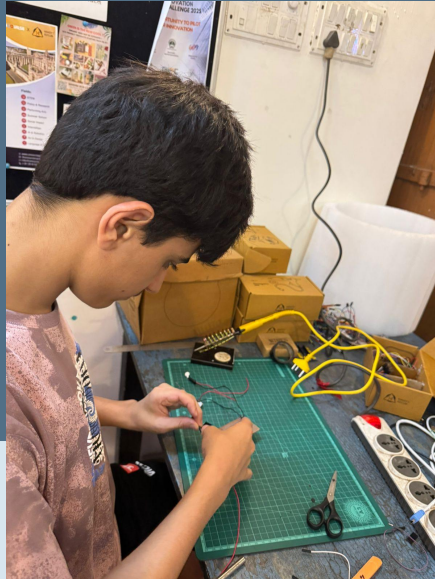
Day 6

Finalised the code and rectified our mistakes we made while soldering.



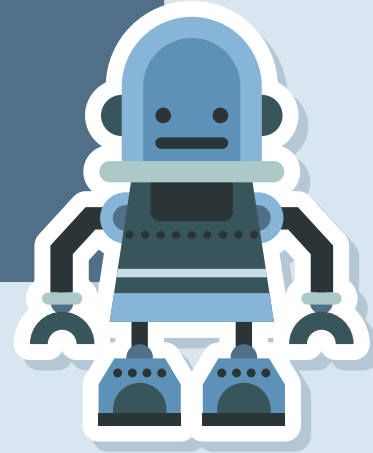
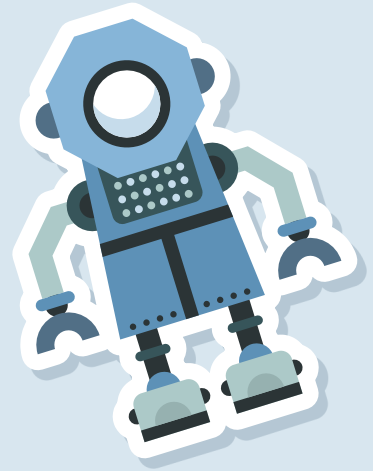
PCB and Soldering

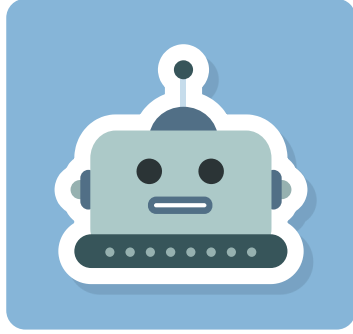
This is a skill that we used to connect all of our components together. This is done using a soldering wire and a solder iron.



CAD(Computer Aided Design) and 3D Printing

We used these skills to create a stand that would enable us to place all of our components on the cricket bat and also an ESP32 on the users neck.

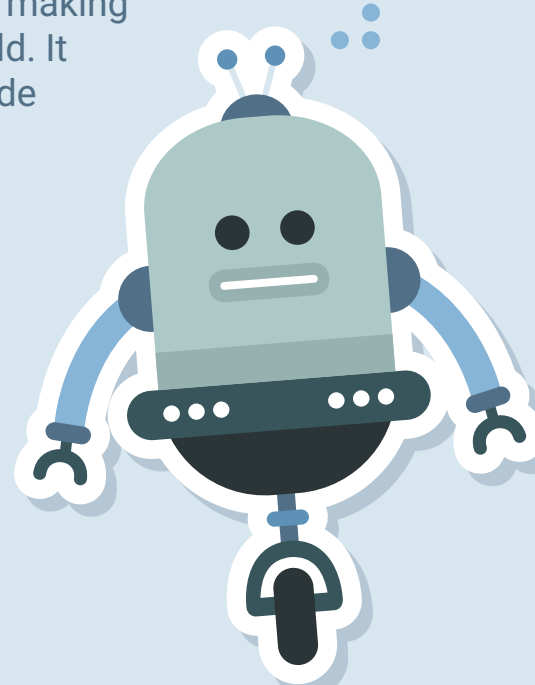
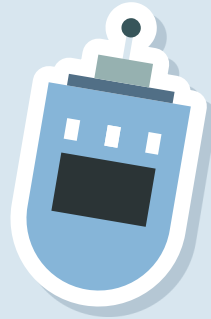




Coding



We used this skill to bring our project to life by making all of our components work the way they should. It provided as the base of our prototype as it made everything we created function.



THANKYOU

