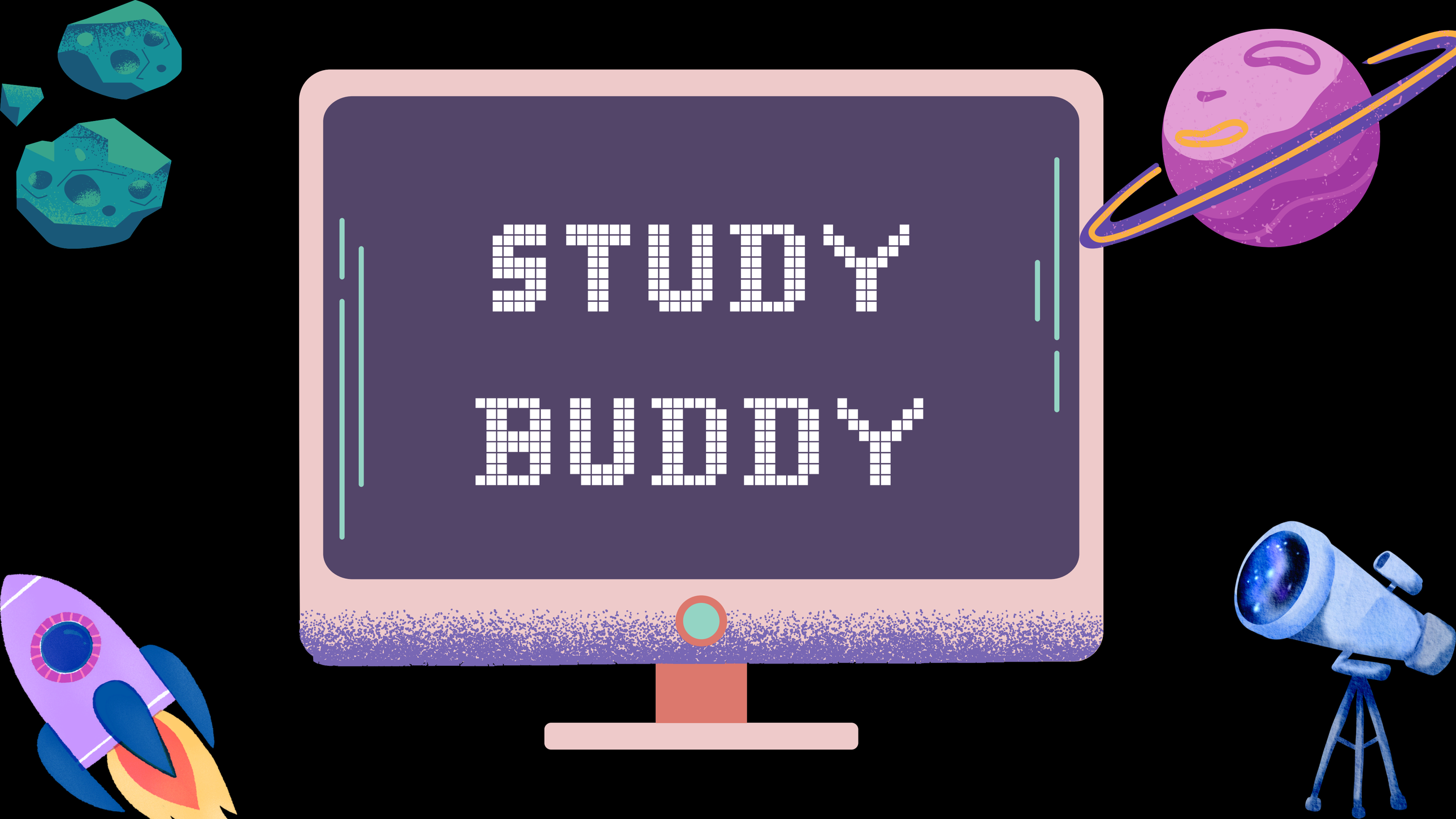
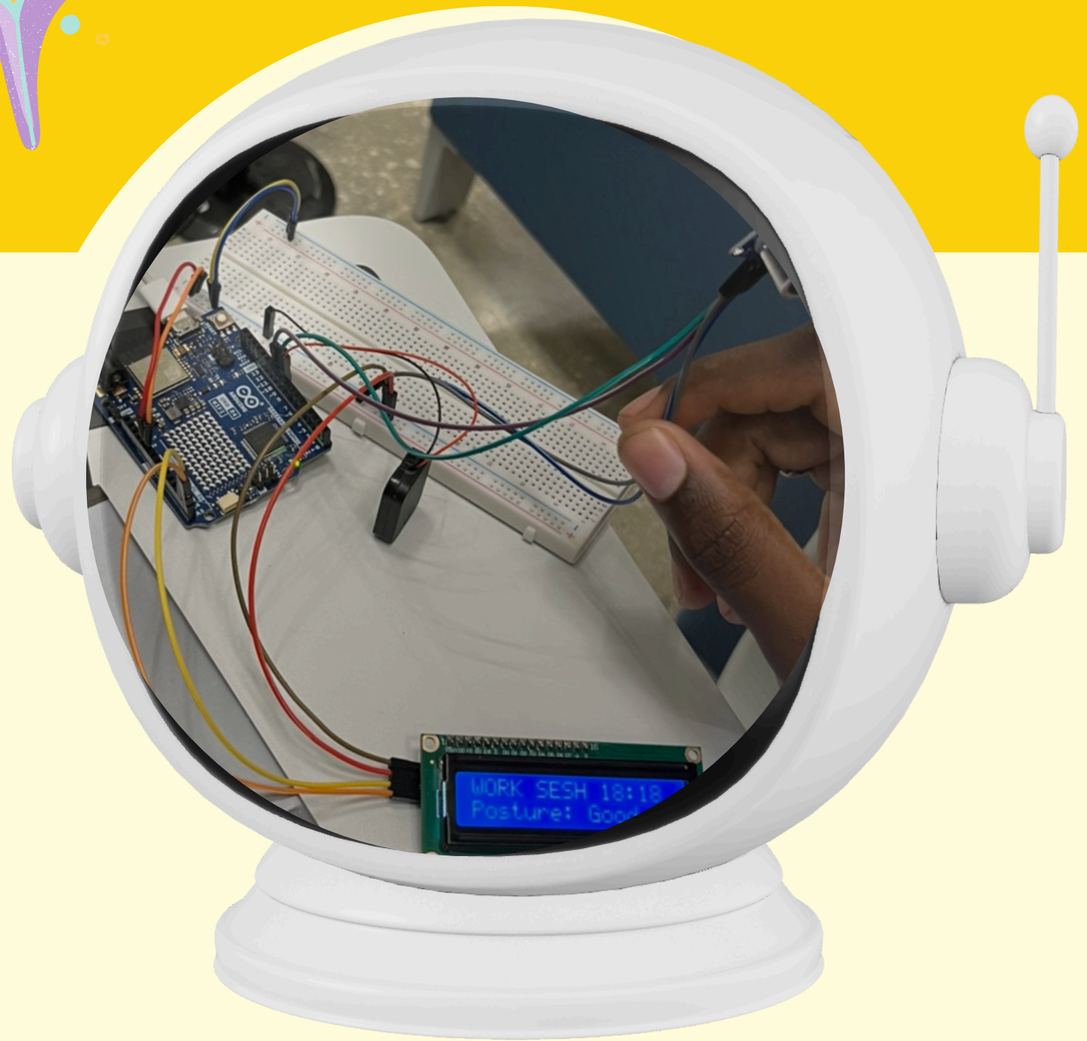

STUDY
BUDDY

PROJECT OVERVIEW

The Study Buddy project is designed to help students maintain proper posture and improve focus during study sessions. It utilizes an ultrasonic sensor to measure the user's distance from the screen and provides alerts when posture adjustments are necessary, thereby reducing the risk of back pain and eye strain. In addition, it features a Pomodoro timer that allows users to set personalized study and break intervals, promoting productivity, balance, and overall well-being.

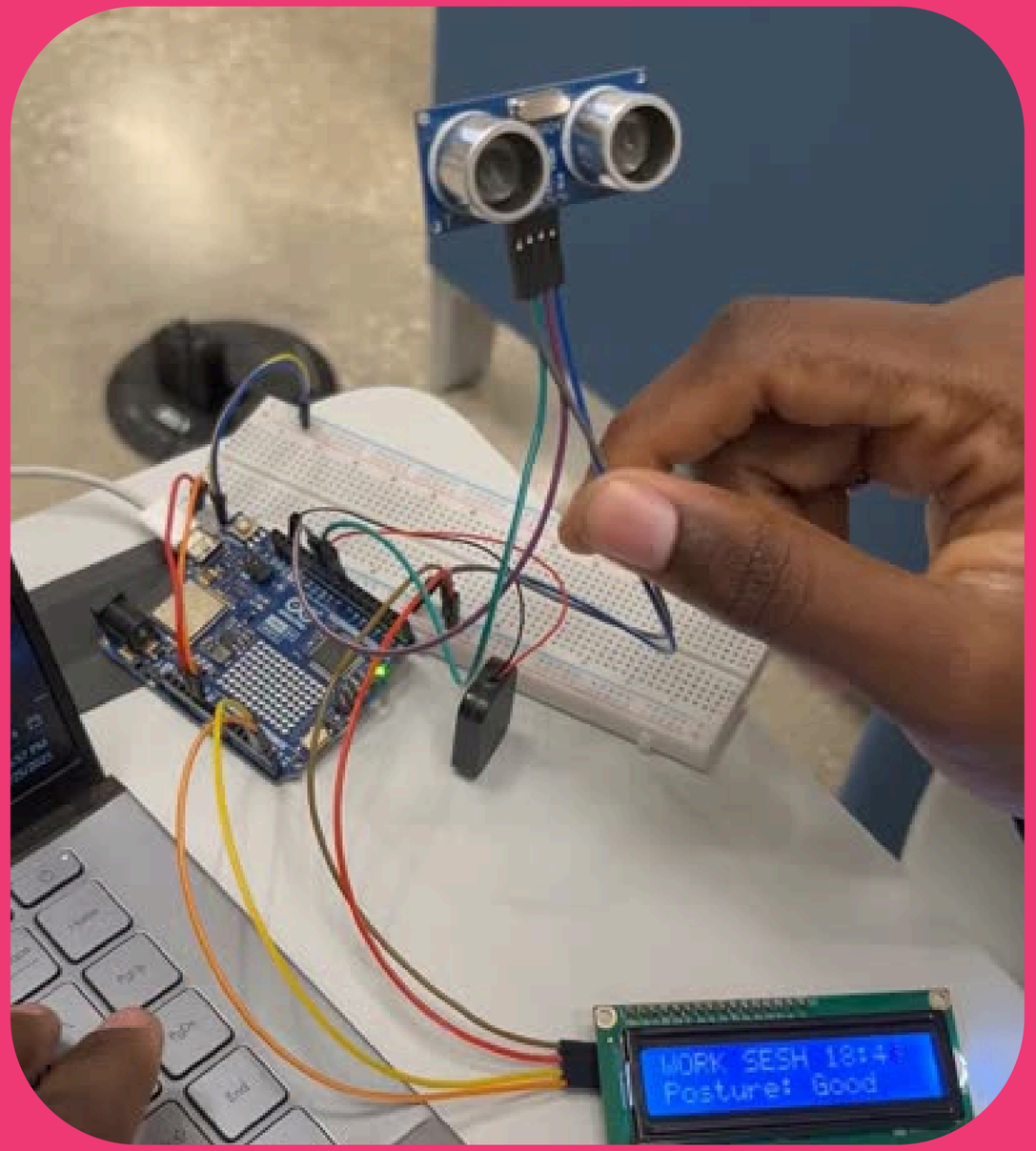
INSPIRATION



Our inspiration for the project was wanting to help our peers with a common phenomenon - bad posture. The Pomodoro timer attachment was to help studying with a well known study technique.

HOW IT WORKS

Tells You When You're Too Close!



Tells You When You're Too Far!

CHALLENGES WE FACED

- We faced was deciding on a project idea that everyone agreed on. We had multiple concepts at first and even used a spinning wheel to make our final decision.
- Once we started building, we faced issues with connecting the hardware components, especially when wiring the ultrasonic sensor and LCD display correctly.
- Another challenge was getting accurate distance readings to detect slouching without false alerts. We also had to troubleshoot errors while uploading the code to the Arduino due to missing ports and board setup issues.
- Time management was another difficulty, as we had to balance coding, testing, and assembling the hardware within the limited hackathon time.

ACCOMPLISHMENTS

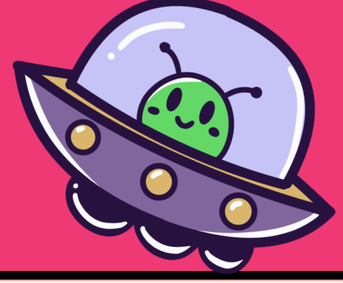
- We are helping students with strategies to not feel overwhelmed while studying.
- Promotes better study habits among students
- Encourages awareness of posture and physical health
- Reduces health issues caused by poor posture and long screen time
- Collaborated effectively through coding, testing, and hardware setup
- Gained hands-on experience in circuit design, programming, and teamwork

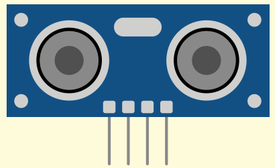
We are also proud of completing our project on time!

NEXT STEPS

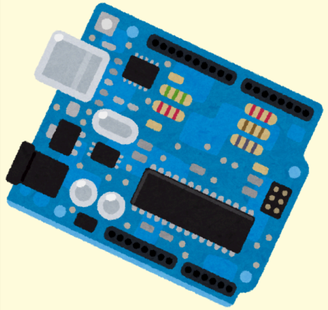
- Allow personalization for users
  - Select times with button
- More appealing sound
- 3D print case for Ultrasonic sensor
  - #aesthetics
- Add batteries

PARTS WE USE



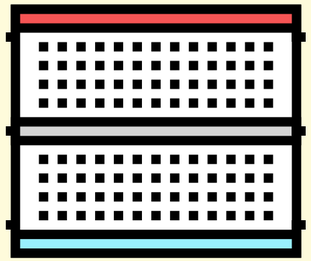


Ultrasonic Sensor

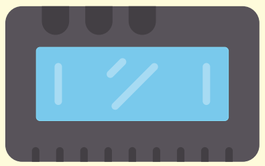


Arduino

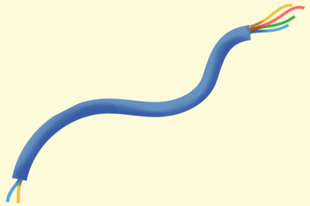
Speaker



Breadboard



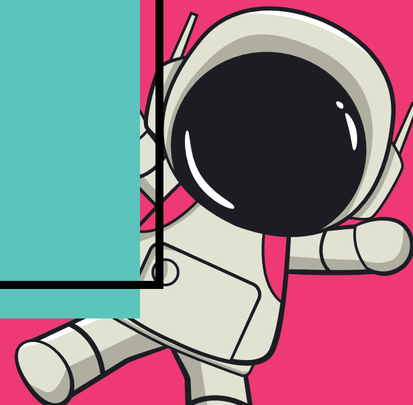
LCD Display Screen



Wires

CHECK OUT OUR PROJECT!

GITHUB LINK



THANK YOU!!