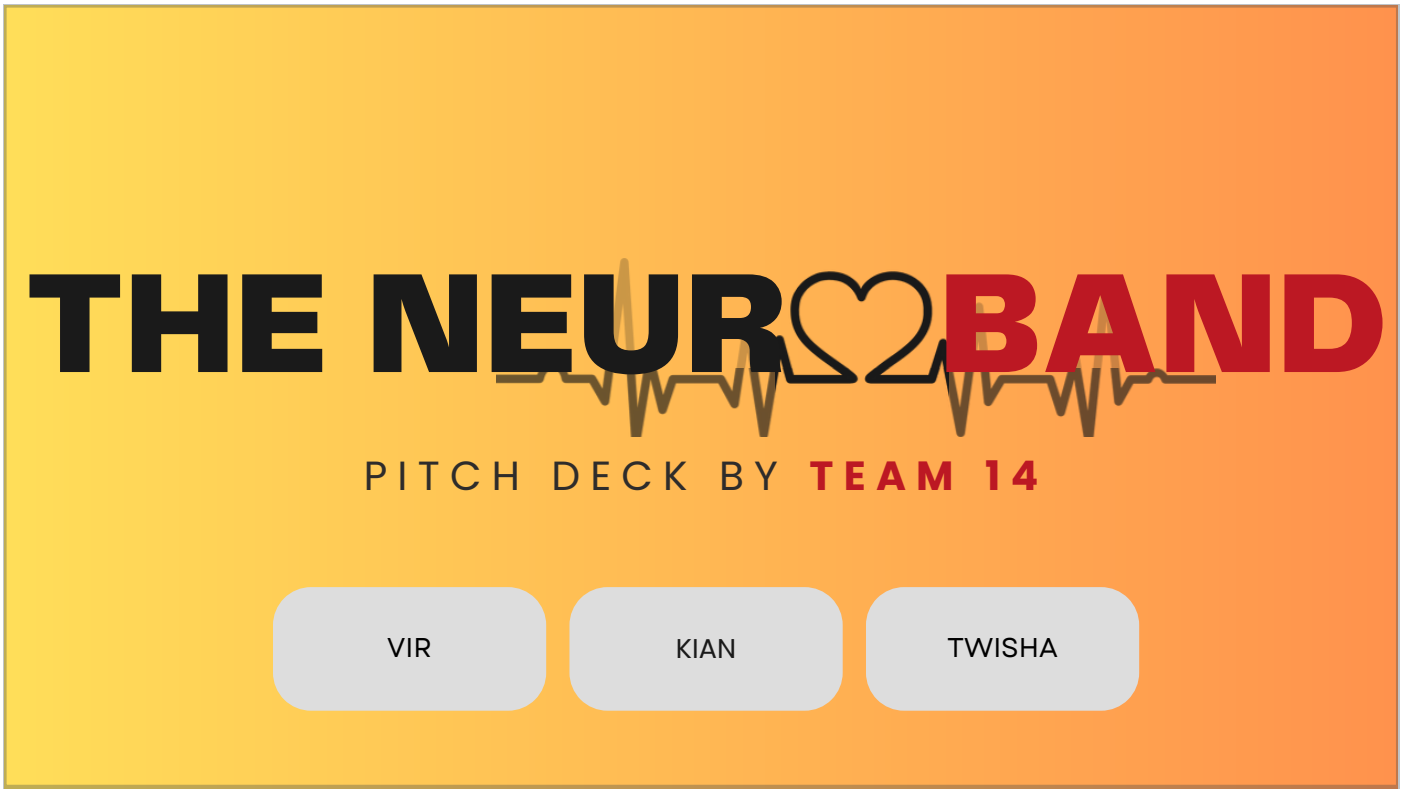


Parts of the presentation:
- Problem statement ✓
- Solution + how it works ✓
- Key features ✓
- Journey + setbacks
- How we solved them

The Problem

Parts of the presentation:
- Problem statement ✓
- Solution + how it works ✓
- Key features ✓
- Journey + setbacks
- How we solved them

Anxiety disorders affect over 300 million people worldwide, making them one of the most prevalent mental health conditions today.

In countries like the United States, nearly 1 in 5 adults suffer from an anxiety disorder each year

What are anxiety attacks and must we address them?

Anxiety attacks are characterised by feelings of intense discomfort and restlessness. Those with anxiety face these regularly, sometimes multiple times a day.

This causes problems such as disruptions in daily schedule, sleep disruptions, and mental health problems, which can lead to health issues such as heart disease, and diabetes.

Panic attacks are characterised by feelings of intense discomfort and restlessness. Those who have anxiety or related panic disorders face panic attacks regularly, some facing these attacks multiple times a day.

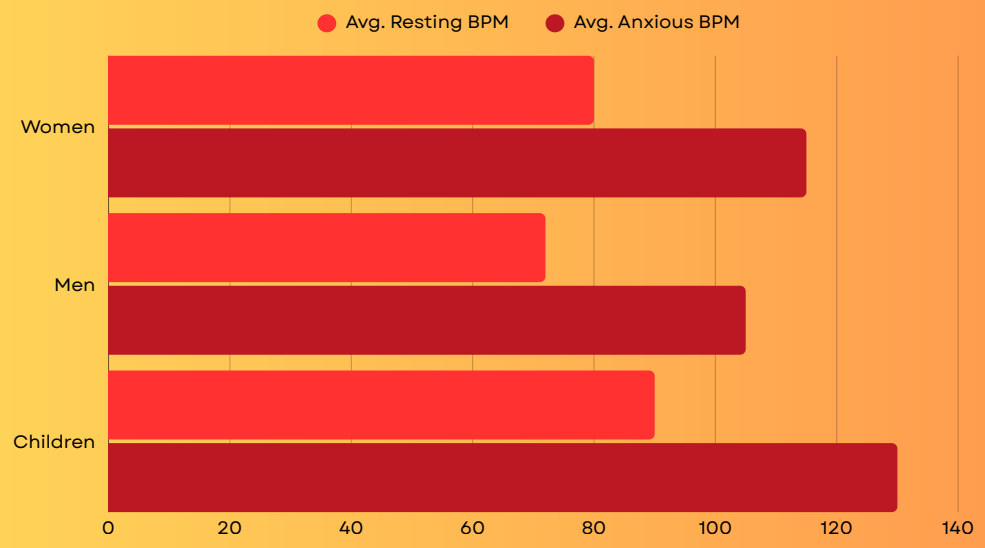
This can cause many problems for those with anxiety, such as disruptions in daily schedule, sleep disruptions, and mental health problems, which can lead to health issues in the long term, such as heart disease, and diabetes.

It can strike without warning, be it during a meeting, while driving, at school, or even in settings that may seem calm.

In these situations, the victims are often left feeling powerless, and unable to function effectively.

Most anxiety relief systems use static heart rate thresholds, ignoring that panic can strike at different heart rates for different people.

They don’t adapt to individuals, making them unreliable at detecting when someone is truly at risk of a panic attack.



This doesn't only vary between groups, but widely between individuals as well, due to factors such as age, gender and genetics!

Our Solution,

THE NEUR  BAND

We offer a smart, discrete wristband designed to help users control their anxiety before it takes control, no matter what setting they're in, whether they are in school, at work or in a meeting.

Unlike traditional wearables, the Neuroband learns your unique heart rate patterns and adapts.

Key Features

ADAPTIVE ANXIETY SENSING

By analysing the heart rates at which the user has previously triggered the haptic feedback, the band calibrates itself to suit the person's most likely threshold.

AUTOMATIC HAPTIC FEEDBACK

One can't be expected be aware enough to press a button during an anxiety attack. So, the motors pulse automatically when the calibrated threshold has been reached.

A SUBTLE DESIGN

Designed to look like a sleek, everyday wristband, it offers support to the wearer without ever standing out.
It’s perfect for a those who value privacy and subtlety.

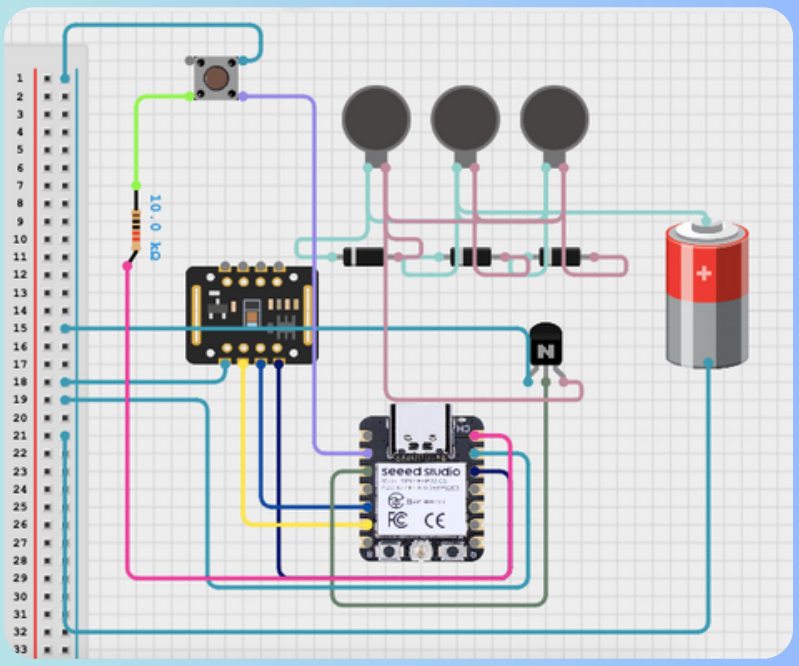
STIMULATES STRESS RELIEF ACUPOINTS

The vibration motors target important acupoints that have been known to provide the maximum stress relief.
(

Our Journey

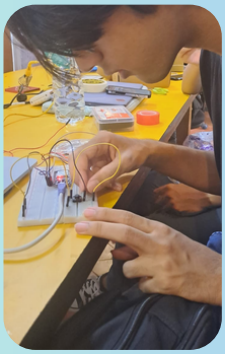
STEP 1-

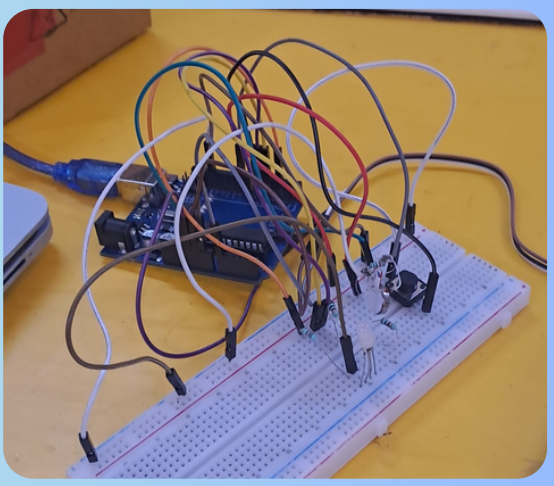
Designing the circuit



STEP 2-

Assembling components on the breadboard

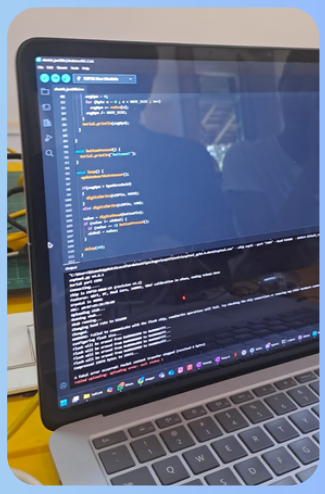




STEP 3-

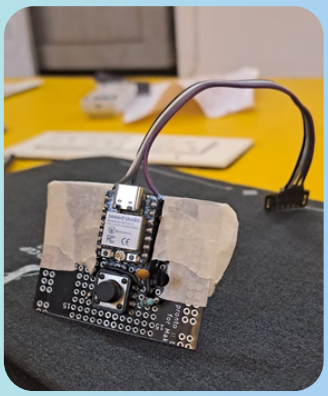
Writing, uploading, and fixing the code

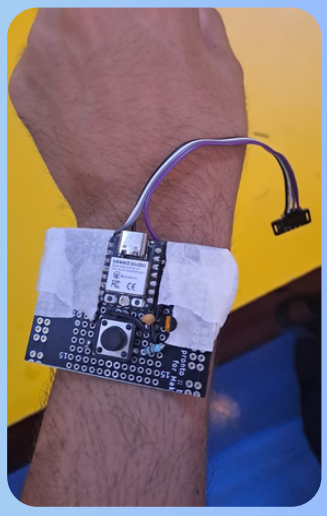
...a million times!



STEP 4-

Miniaturising





STEP 5-

The final product!

THE NEUROBAND

Obstacles and how we overcame them

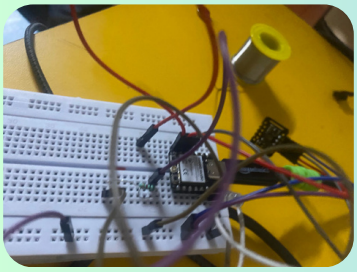
-the code didn’t wanna code so like
-also the soldering was bleh
-also we screwed up a microcontroller
-also we wasted like 2 days with the suckass sensor (heart rate sensor)
-time management

Code

We spent a while working with our external mentor, Vihang sir, to make sure the code functioned effectively without any bugs.

Miniaturising

Soldering the components onto the smaller circuit board was challenging, but we overcame it by using a multimeter to identify short circuits, with guidance from Anool Sir.



Thank You