

# THE NEUR<sup>2</sup>BAND



PITCH DECK BY TEAM 14

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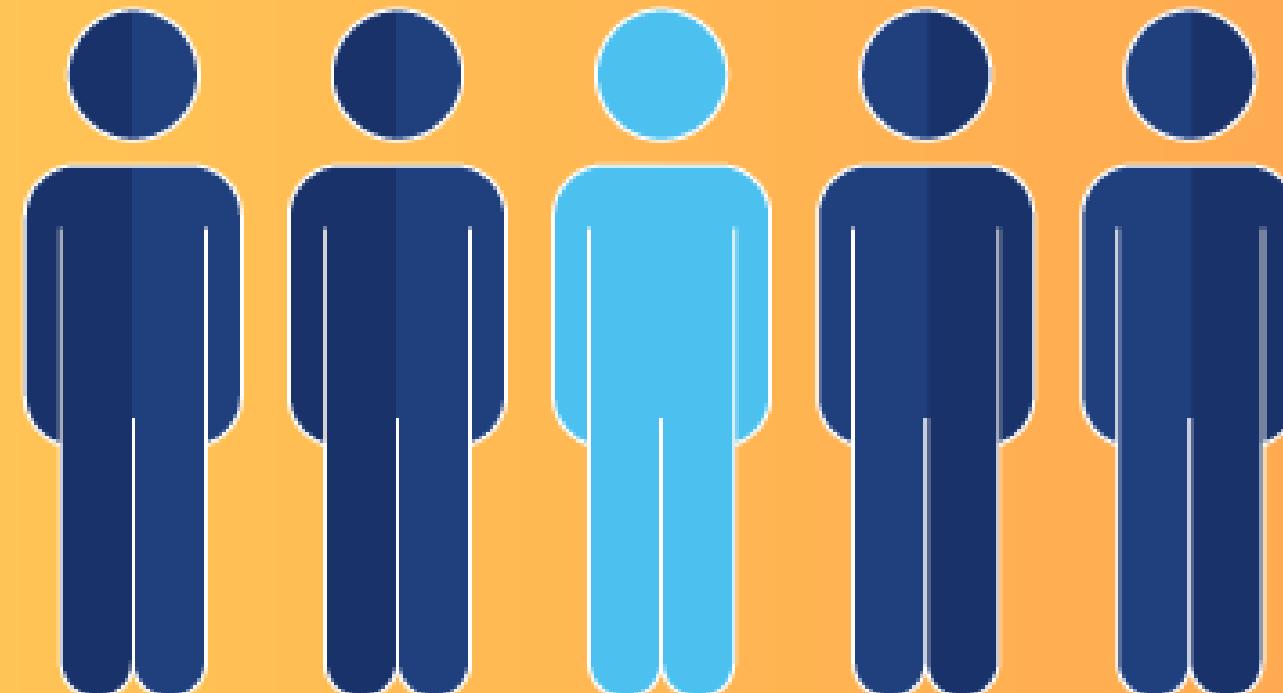
KIAN

TWISHA

# **The Problem**

**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.**

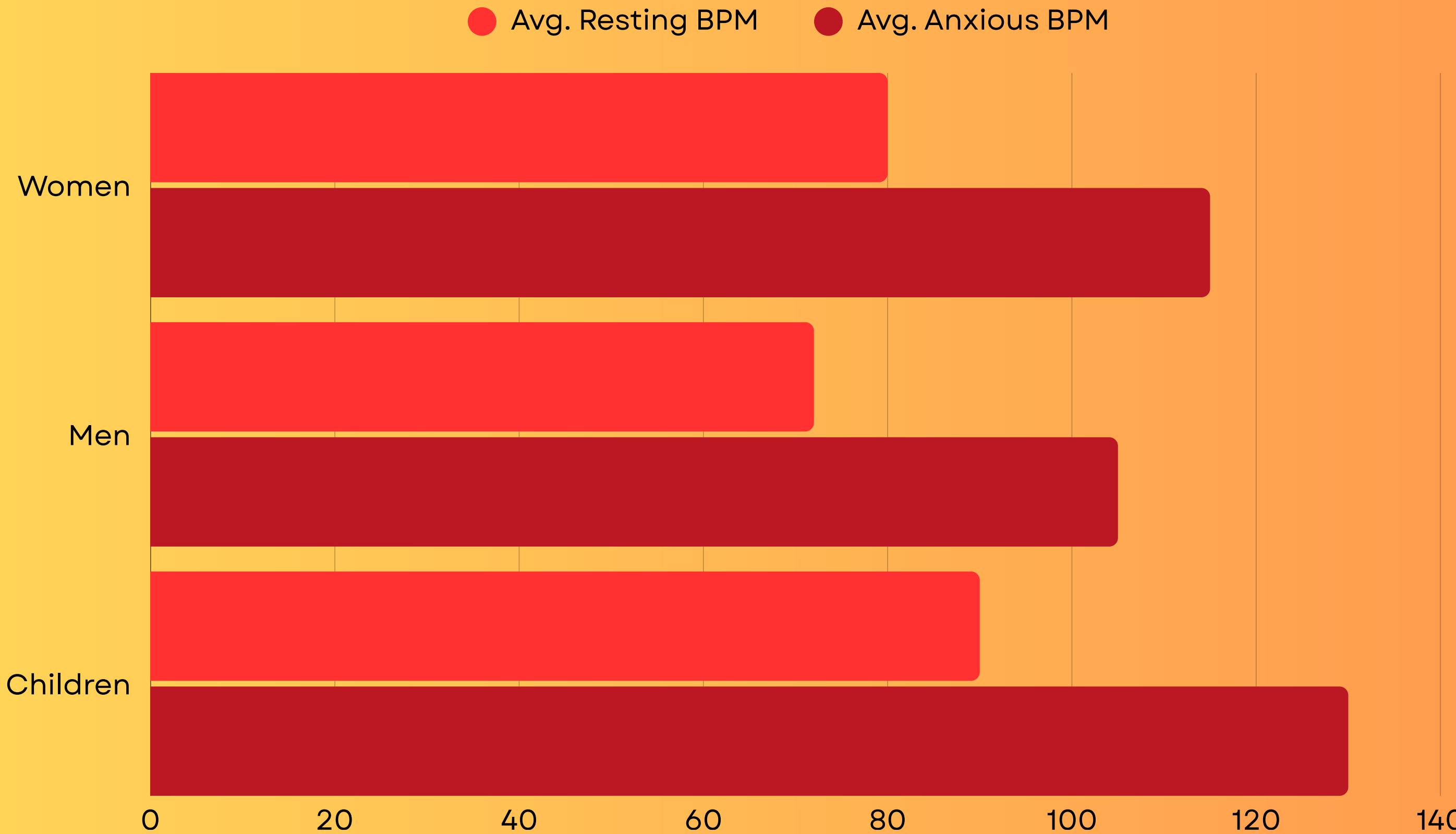
**This causes problems such as disruptions in daily schedule, sleep disruptions, and mental health problems, which can lead to **health issues** such as **heart disease, and diabetes**.**

**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<sup>2</sup>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 those who value privacy and subtlety.

## **STIMULATES STRESS RELIEF ACUPOINTS**

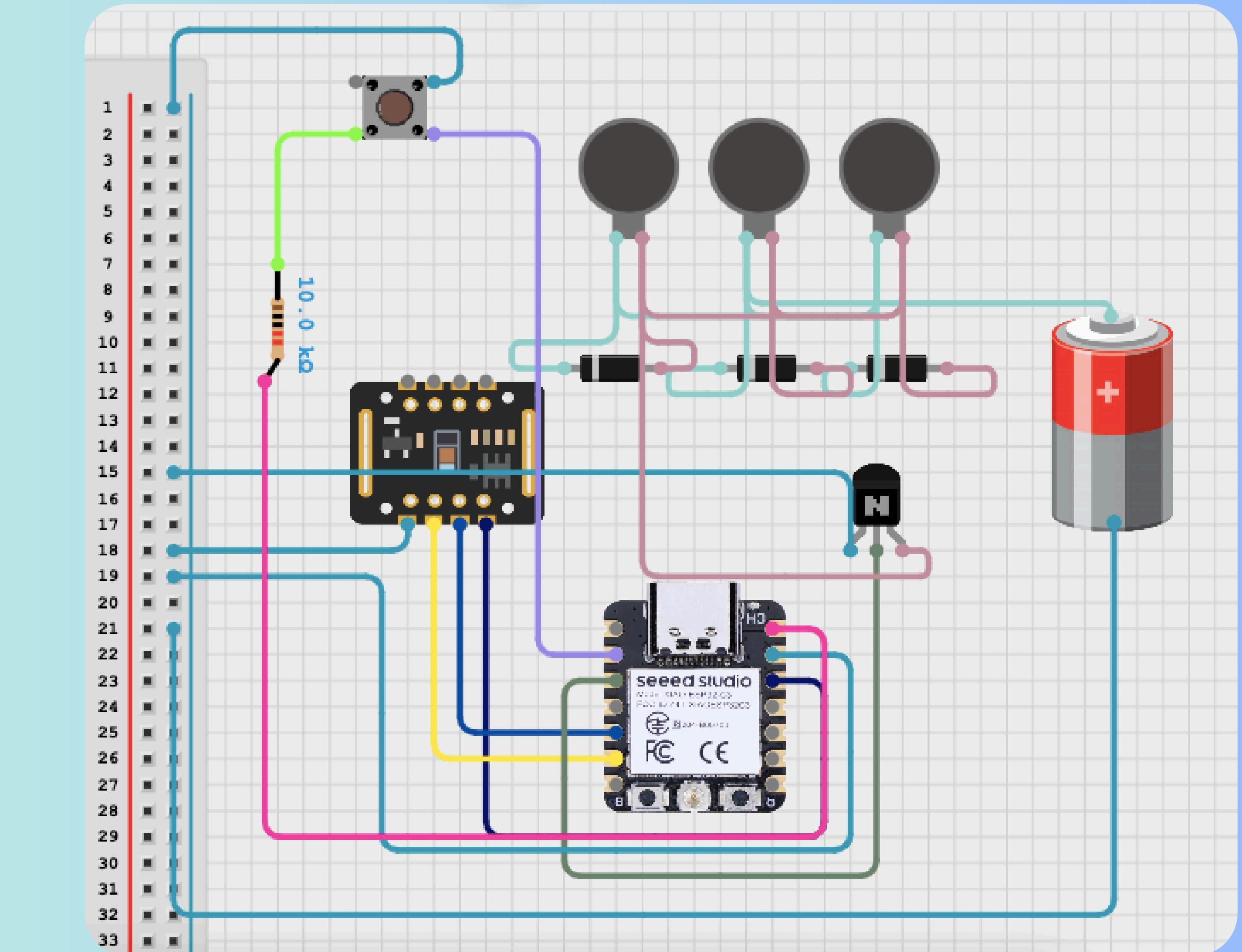
The vibration motors target important acupoints that have been known to provide the maximum stress relief.

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# **Our Journey**

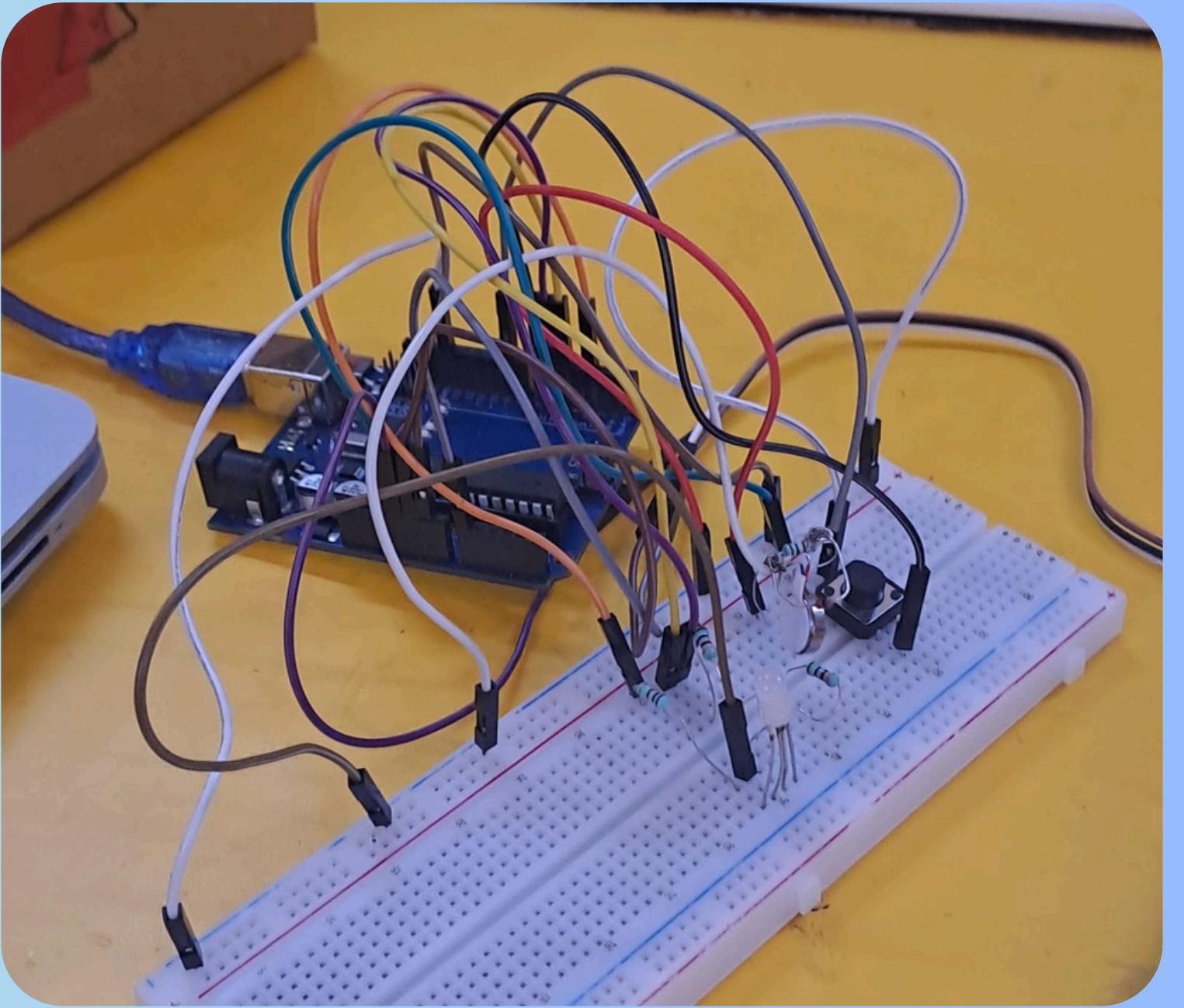
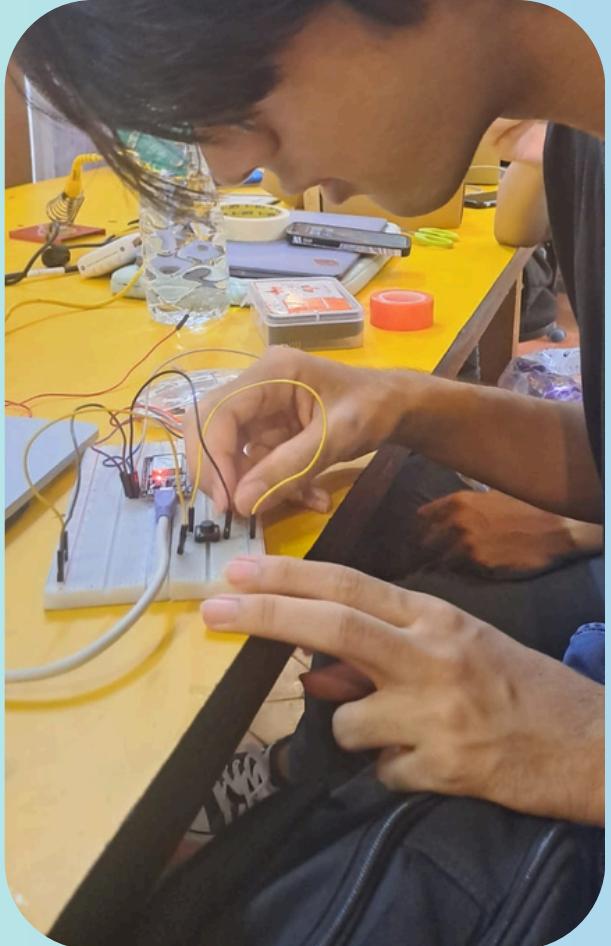
# STEP 1-

## Designing the circuit



## **STEP 2-**

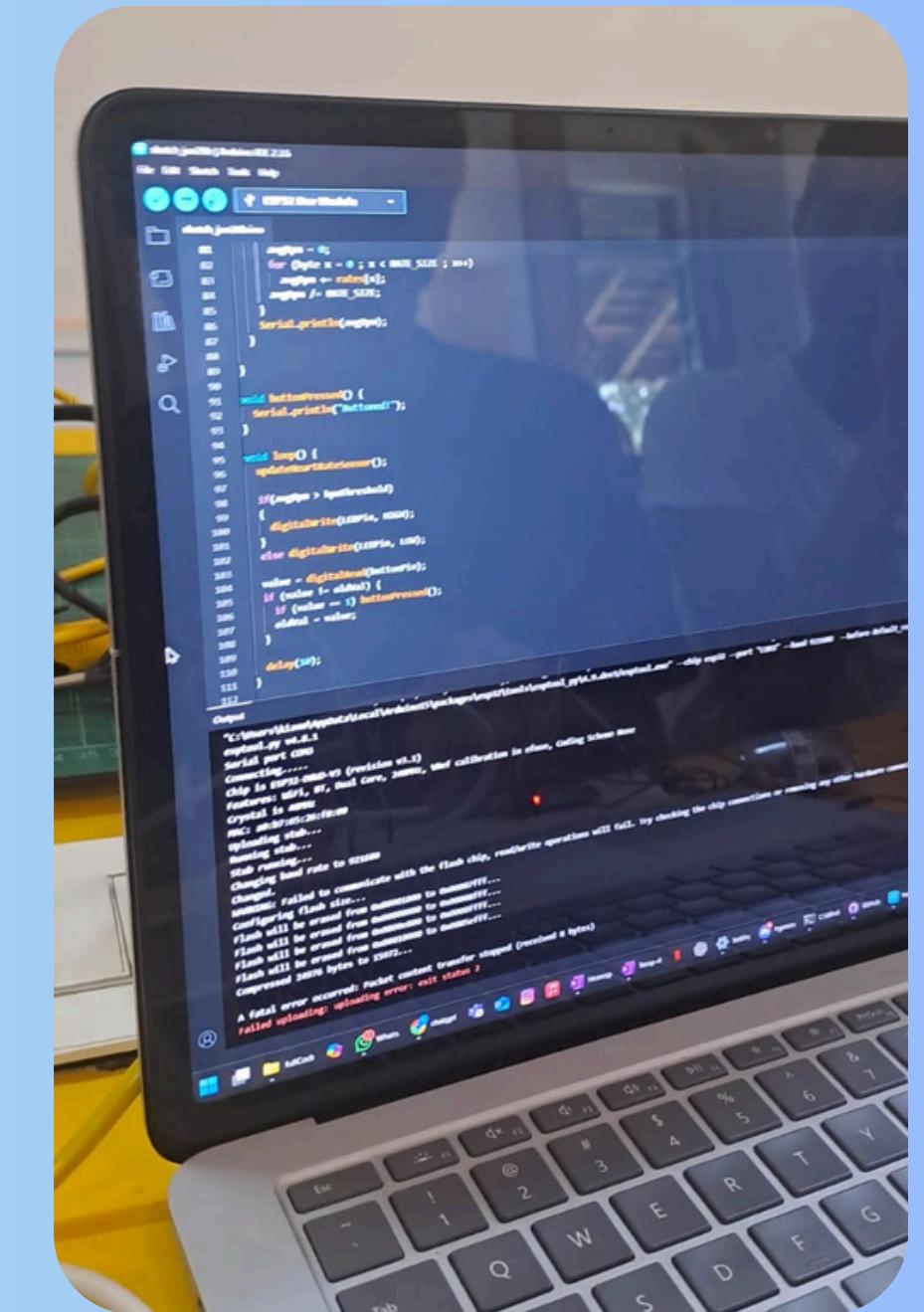
# **Assembling components on the breadboard**



# **STEP 3-**

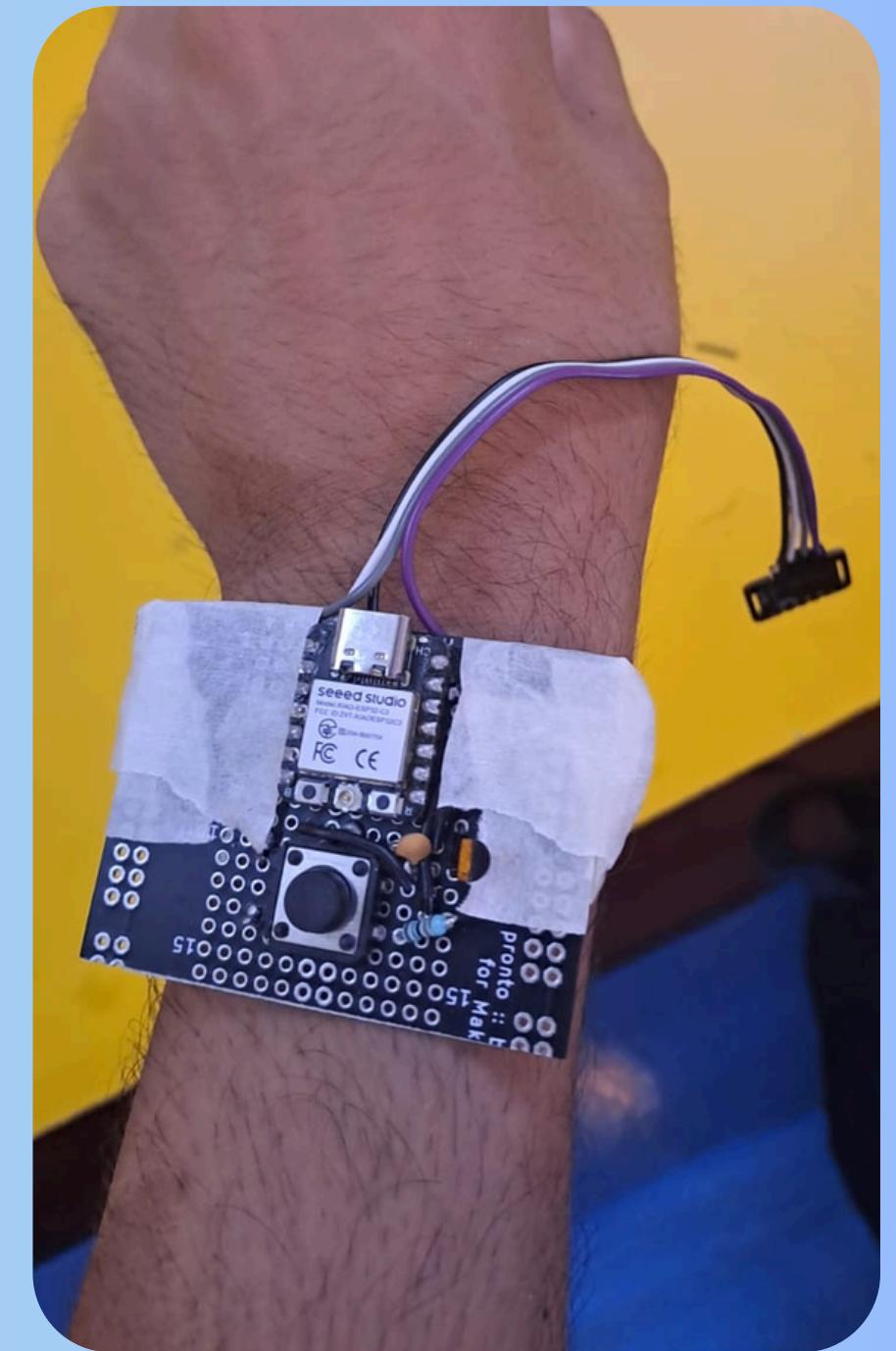
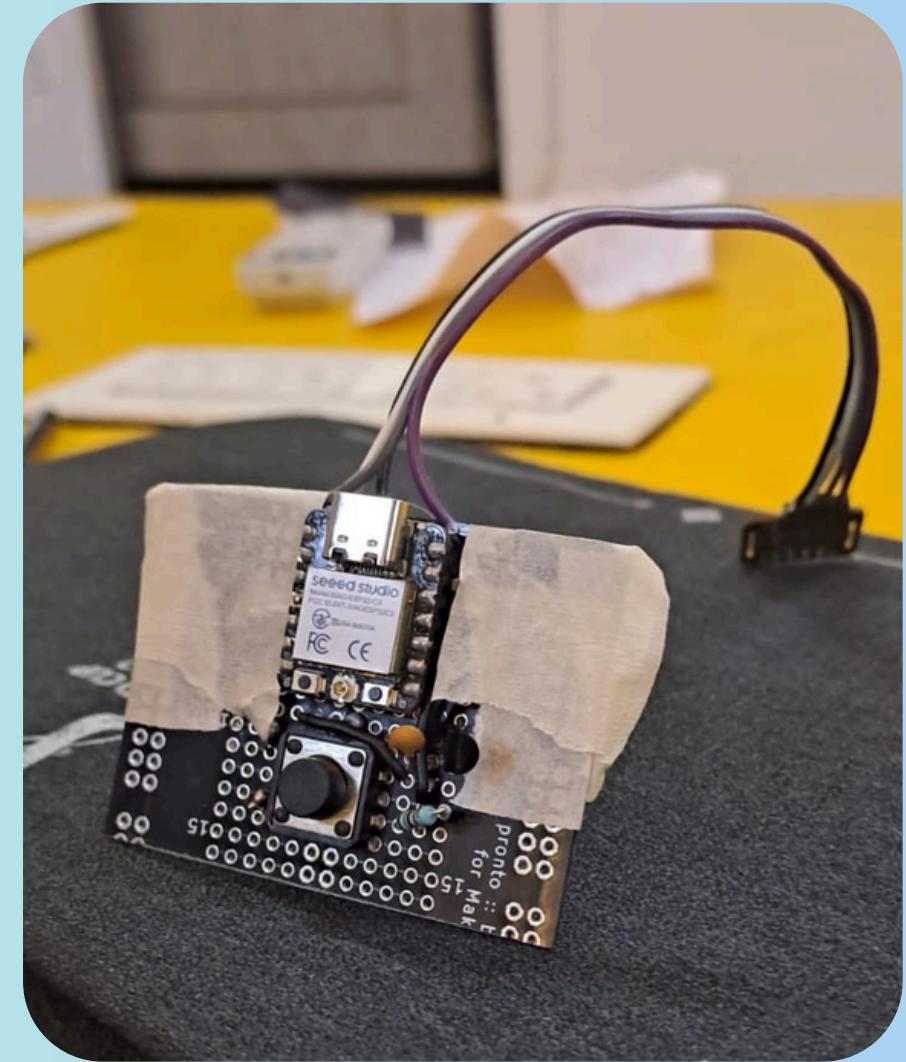
# **Writing, uploading, and fixing the code**

**...a million times!**



# STEP 4-

# Miniaturising



## **STEP 5-**

**The final  
product!**

**THE NEUR<sup>2</sup>BAND**



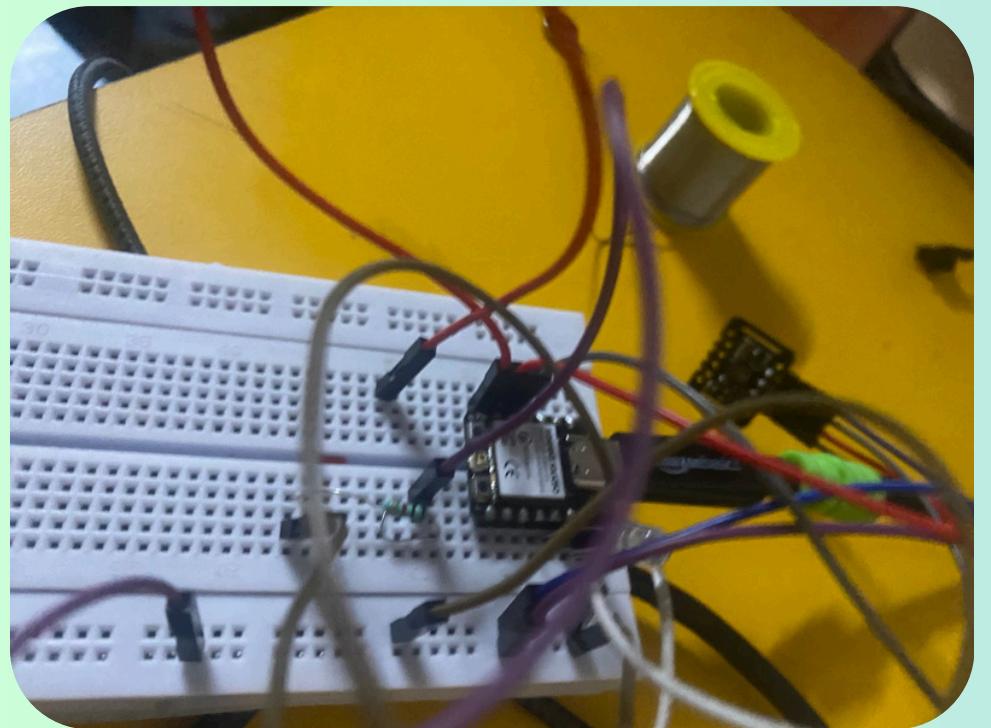
**Obstacles and how  
we overcame them**

## **Code**

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

## **Miniaturing**

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

