PRODUCT DESIGN AND DEVELOPMENT

COURSE PROJECT

How to avoid 'Neck bending while mobile talking' on 2-wheeler ride.

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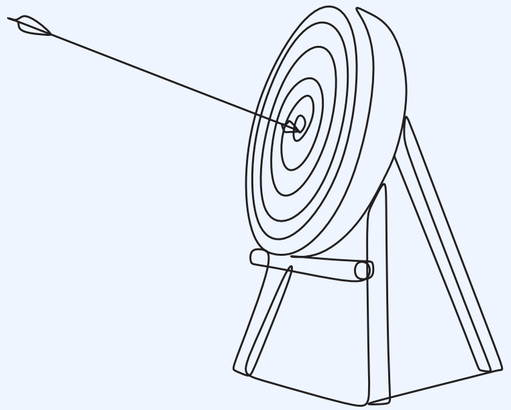
INTRODUCTION

- In todays era of wireless communication devices, a Mobile phone has become a need of us. Phone calls is the most common way of communication now.
- The calls can be casual, important or emergency.
- So the emergency does not stop while we are driving our two wheelers.
- It may be possible that its too late before we reach our destination and receive the call.
- Or our mind keeps bugging while driving why the person called? Was it an emergency?
- Which results in losing concentration while driving.
- So people prefer to attend the call while driving and they generally prefer to do so by bending their neck.

OBJECTIVE



- **Problem Statement-**
  "Design an innovative support to avoid 'neck bending while mobile talking' on 2-wheeler ride".
- **We have to provide a technical and a non-technical solution to solve the problem stated above.**

NEED OF THE PRODUCT

- According to the latest figures released by the National Crime Records Bureau (NCRB), up to 17 percent of the total road accidents which makes a total of 19,997 road accidents occurred in the year 2021 due to the use of mobile phones by drivers while driving. These accidents claimed 1,040 lives, according to a Ministry Of Road Transport and Highways (MORTH) report.
- From above report we can clearly see this practice causes accidents and apparently deaths.
- Not just that but it also causes neck pain problems which can be problematic in the Long run.

TECHNICAL SOLUTION TO SOLVE THE PROBLEM

DESCRIPTION

- We have designed a helmet with in built speakers, microphone, Bluetooth system and action buttons.
- We will also provide a AUX output just in-case if the battery runs out.
- The speakers of the helmet will be situated near the ears, beneath the cushion of the helmet.
- The microphone will be placed on the chin piece of the helmet, in order to lessen the background traffic noises going on the other side.
- The action buttons will be to pick-up, hold or end the call. We will also provide volume adjustment.
- The Bluetooth system can be also used to get navigation while driving.
- The battery is situated at the base of backside of the helmet.

MATERIALS USED

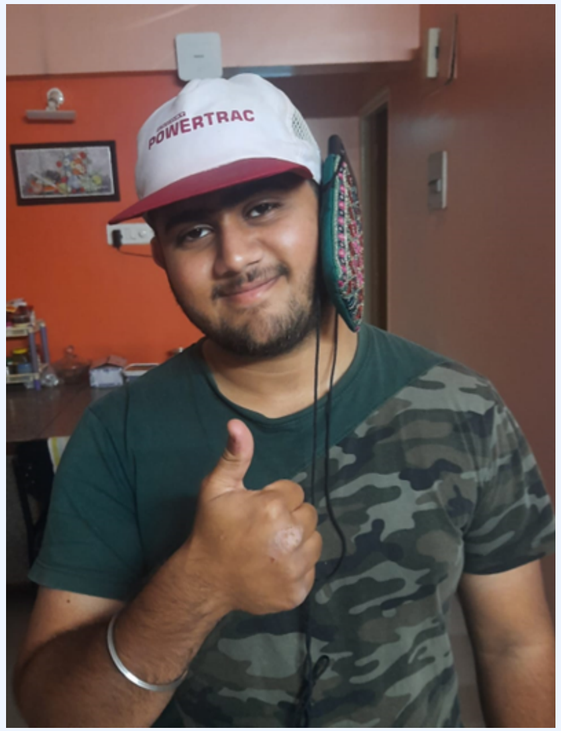
- Helmet
- Pair of speakers
- Microphone
- Bluetooth connectivity system
- Push Switches for operations
- Rechargable Battery
- Input pin for AUX cable

COST ESTIMATION

- Helmet : 800-1000 RS
- Speakers : 225-250 RS (PAIR)
- Microphone : 50-60 RS
- Rechargeable Battery : 100-200 Rs
- Bluetooth Receiver : 100-150 Rs
- AUX pin : 70-80 Rs

<u>TOTAL</u> : 1350-1750 Rs

NON-TECHNICAL SOLUTION OF THE PROBLEM



DESCRIPTION

- The product is basically a monkey cap with an extra pocket on either sides.
- The pocket is made up of same material as cap i.e. woolen fabric.
- The pocket is designed in such a way that the earpiece of phone will be near the users ear and the bottom (microphone) is near the mouth.
- The pocket will have a lid closing with Velcro.
- A small patch of mesh like fabric is placed inside the cap at the points of earpiece and mouthpiece to allow clear voice exchange.

MATERIALS REQUIRED

- Woolen cap/Summer cap
- Velcro
- Mesh fabric

COST ESTIMATION

- Woolen/Summer cap with pocket : 150-200 Rs
- Velcro Patch : 10-15 Rs
- Mesh Fabric : 25–30 Rs

TOTAL : 180-250 Rs

THANK YOU!