SMART PHONE HEART RATE MONITOR

UMANSIA Emre GÖKREM Tuğrul YATAĞAN Muhammet Fatih İNANÇ

AIM

- ▶ Measure heart rate
- ▶ Track burning calories
- ► Track sportive activities





AIM

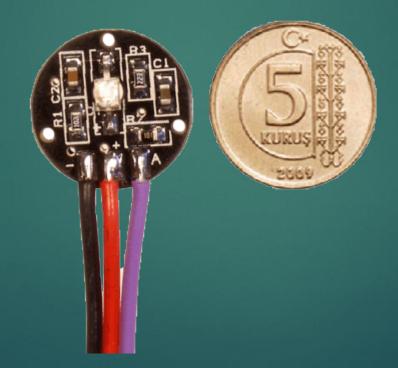
- ▶ Integrated on earphones
- ▶ On Android smart phones
- ► Easy to use as earphone





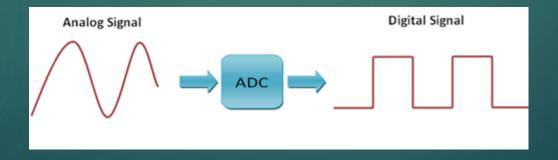
HOW IT WORKS?

- ▶ Integrated heart rate sensor on earphone
- ▶ Circuit contains only LED, phototransistor and amplifier



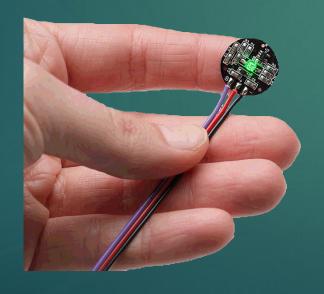
HOW IT WORKS?

- Raw analog signals are transfered over microphone input of the smart phone
- Let the Analog to Digital converter of smart phone do the conversion job
- Now, smart phone processes digital signals to find heart rate and calorie consumption



HOW TO USE?

- ▶ Plug earphone to smart phone as usual
- Wear earphone
- Wear sensor circut on earlobe





HOW TO USE?

- ▶ Turn on smart phone application
- Start monitoring heart rate
- Start tracking your sportive activites and calorie consumption



WHY TO PREFER?

- Easy to waer as earphone
 - No need to extra devices like wristband, necklace, chest band
- ▶ No need to Bluetooth:
 - ▶ Cheap
 - ▶ Low power consumption
 - Requires only microphone input
- No need to extra proccessor unit

COMPETITORS

▶ Lots of heart rate monitor gadgets on market

▶ All of them use Bluetooth

Wrist, neck and chest; not ear

Expensive









THANK YOU FOR LISTENING TO US!