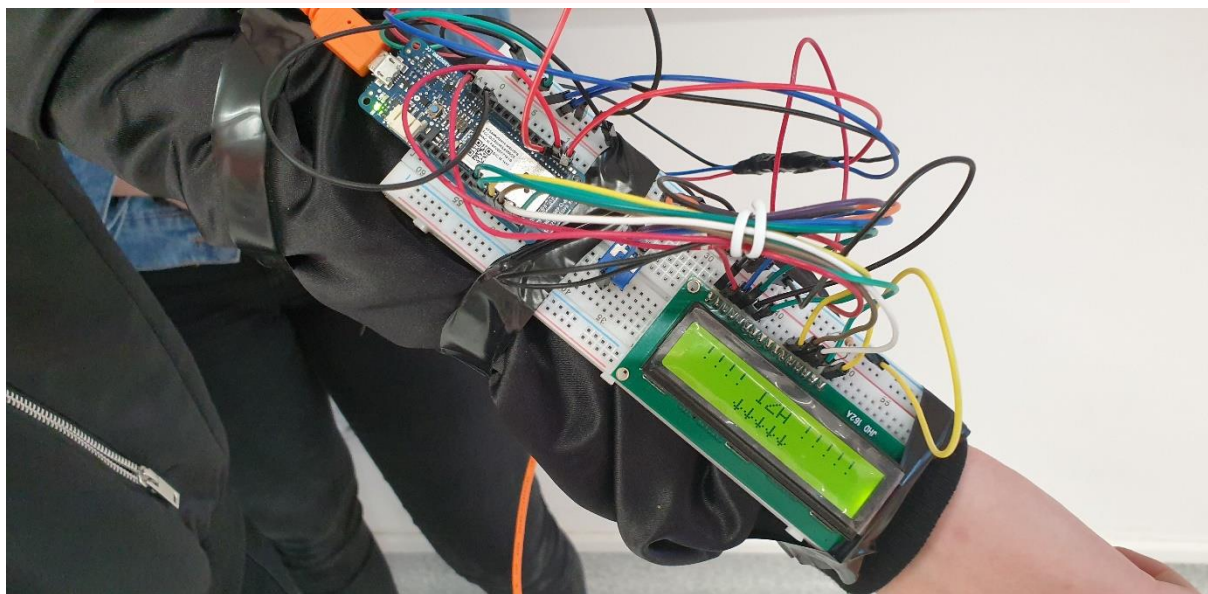


Generacija **NOW**

Projekt 2021.

Naziv projektnog rada: : " **Jakna 360 °** "



Sažetak projekta: Korištenjem IoT opreme ugrađene u jaknu, nastojalo se stvoriti projekt koji omogućava sigurnost u prometu time što javlja blizinu objekta.

Video: <https://vimeo.com/556881130>

Jakna 360° [NOT YET RATED]
5 minutes ago | More
Željko Vučković

Settings Review tools Send file

Get more privacy options, more player customization, and more storage. Upgrade now

Download Share

Get more storage, unlimited video creation, collaboration tools, and much more. Upgrade now

Ime i prezime mentora: Željko Vučković, prof

Kontakt: zeljko.vuckovic@kr.t-com.hr

GSM: 0953973928

Naziv ustanove: OŠ Bedekovčina

Adresa: Gajeva 13

Poštanski broj: 49221

Mjesto: Bedekovčina

e-mail ustanove: os-ravnatelj@kr.t-com.hr

Učenci u timu: Lorena Bajza, Katarina Marić, Tamara Žegrec,
Tamara Rumbak

Razred: 8.r

Tehnički opis projekta:

U projektu smo koristili mkr1000, senzore za pokret, doppler radar, ekran i zvučnike, te njihovom integracijom u jaknu, stvorili smo svoj projekt nosive elektronike koja bi mogla biti korisna u prometu.

Planirane su još neke mogućnosti pa je i naručena oprema iz Kine, ali je stiglo prekasno za primjenu.

Realizacija

Prema video prilogu, vidi se audio / video informiranje s koje strane se približava objekt te omogućava sigurnije kretanje.

Kod: prilog

```
#include <LiquidCrystal.h>
```

```
LiquidCrystal lcd(0, 1, 2, 3, 4, 5);
```

```
int calibrationTime = 30;
```

```
int sensorRightP = 6;
```

```
int sensorLeftP = 7;
```

```
int sensorBackP = 8;
```

```
int movementDetectedR=false;
```

```
int movementDetectedL=false;
```

```
int movementDetectedB=false;
```

```
int inactive=millis();
```

```
int inactiveSet =0;
```

```
byte arrowdown[8] = {
```

```
  B00000,
```

```
  B00100,
```

```
  B00100,
```

```
  B00100,
```

```
  B10101,
```

```
  B01110,
```

```
  B00100,
```

```
};
```

```
byte arrowdownR[8] = {
```

```
  B10000,
```

```
  B01000,
```

```
  B01000,
```

```
  B00100,
```

```
  B00101,
```

```
  B00011,
```

```
  B00111,
```

```
};
```

```
byte arrowdownL[8] = {
```

```
  B00001,
```

```
  B00010,
```

```
  B00010,
```

```
  B00100,
```

```
  B10100,
```

```
  B11000,
```

```
  B11100,
```

```
};
```

```
void setup()
```

```
{
```

```
Serial.begin(9600);
```

```
lcd.begin(16, 2);
```

```
lcd.setCursor(0, 0);
```

```
lcd.print("STEM GRUPA");
```

```
lcd.setCursor(0, 1);
```

```
lcd.print("2020./2021.");
```

```
pinMode(sensorRightP, INPUT);
```

```
digitalWrite(sensorRightP,LOW);
```

```
pinMode(sensorLeftP, INPUT);
```

```
digitalWrite(sensorLeftP,LOW);
```

```
pinMode(sensorBackP, INPUT);
```

```
digitalWrite(sensorBackP,LOW);
```

```
// podešavanje senzora
```

```
delay(1500);
```

```
Serial.print("Podesavanje senzora ");
```

```
lcd.begin(16, 2);
```

```
lcd.setCursor(0, 0);
```

```
lcd.print("Podesavanje...");
```

```
lcd.setCursor(0, 1);
```

```
lcd.print("Senzor:D,L,IZA");
```

```
for(int i = 0; i < calibrationTime; i++)
```

```
{
```

```
  Serial.print(".");
```

```
  delay(1000);
```

```
}
```

```
Serial.println(" gotovo.");
```

```
Serial.println("Senzor desno, lijevo, iza ok.");
```

```
lcd.setCursor(0, 1);
```

```
lcd.print("Senzor:D,L IZA OK.");
```

```
delay(3000);
```

```
lcd.begin(16, 2);
```

```
lcd.setCursor(0, 0);
```

```
lcd.print("Detektiram...");
```

```
delay(1000);
```

```
}
```

```
void loop()
```

```
{
```

```
  if(digitalRead(sensorRightP) == HIGH)
```

```
  {
```

```
    Serial.println("OPREZ DESNO ==>>");
```

```
    movementDetectedR=1;
```

```
    inactive=millis();
```

```
    inactiveSet=0;
```

```
  }
```

```
  if(digitalRead(sensorLeftP) == HIGH)
```

```
  {
```

```
    Serial.println("<<== OPREZ LIJEVO");
```

```
    movementDetectedL=1;
```

```
    inactive=millis();
```

```
    inactiveSet=0;
```

```
  }
```

```
  if(digitalRead(sensorBackP) == HIGH)
```

```
  {
```

```
    Serial.println("OPREZ IZA");
```

```
    movementDetectedB=1;
```

```
    inactive=millis();
```

```
    inactiveSet=0;
```

```
  }
```

```
  if(movementDetectedL==1 && movementDetectedB==1)
```

```
  {
```

```
    lcd.begin(16, 2);
```

```
    lcd.setCursor(0, 0);
```

```
    lcd.print(" !! IZA LIJEVO !!");
```

```
    lcd.setCursor(4, 1);
```

```
    lcd.createChar(0, arrowdownL);
```

```
    for(int k=5;k<10;k++)
```

```
    {
```

```
      lcd.setCursor(k, 1);
```

```
      lcd.write(byte(0));
```

```
    }
```

```
    //lcd.print(" <<VVVV ");
```

```
    movementDetectedL=0;
```

```

movementDetectedB=0;
Serial.println("IZA LIJEVO");
}

if(movementDetectedR==1 && movementDetectedB==1)
{
  lcd.begin(16, 2);
  lcd.setCursor(0, 0);
  lcd.print(" !!!! IZA DESNO !!!!!");
  lcd.setCursor(4, 1);
  lcd.createChar(0, arrowdownR);
  for(int k=5;k<10;k++)
  {
    lcd.setCursor(k, 1);
    lcd.write(byte(0));
  }
  //lcd.print(" VVVV>> ");
  movementDetectedR=0;
  movementDetectedB=0;
  Serial.println("IZA DESNO");
}

if(movementDetectedR==1)
{
  lcd.begin(16, 2);
  lcd.setCursor(0, 0);
  lcd.print(" !!!! DESNO !!!!!");
  lcd.setCursor(4, 1);
  lcd.print(" <<==== ");
  movementDetectedR=0;
  Serial.println("DESNO");
}

if(movementDetectedL==1)
{
  lcd.begin(16, 2);
  lcd.setCursor(0, 0);
  lcd.print(" !!!! LIJEVO !!!!!");
  lcd.setCursor(4, 1);
  lcd.print(" =====> ");
}

```

```
movementDetectedL=0;
Serial.println("LIJEVO");
}

if(movementDetectedB==1)
{
  lcd.begin(16, 2);
  lcd.setCursor(0, 0);
  lcd.print(" !!!! IZA !!!!!");
  lcd.createChar(0, arrowdown);
  for(int k=5;k<10;k++)
  {
    lcd.setCursor(k, 1);
    lcd.write(byte(0));
  }
  movementDetectedB=0;
  Serial.println("IZA");
}

if(((millis()-inactive)/1000>5) && inactiveSet==0)
{
  lcd.begin(16, 2);
  lcd.setCursor(0, 0);
  lcd.print(" Nema pokreta.");
  lcd.setCursor(4, 1);
  lcd.print(" Detektiram... ");
  Serial.println("Nema pokreta. Detektiram...");
  inactiveSet=1;
}

delay(750);
}
```


Slike:



