

# Robocup 25

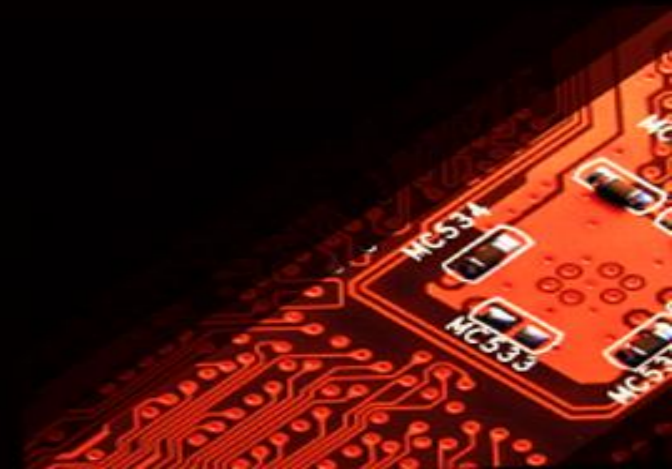
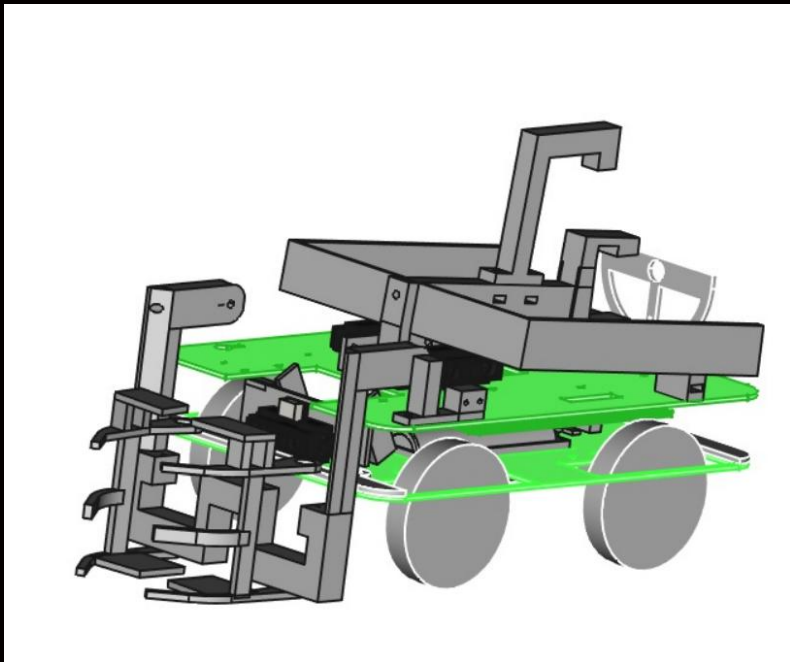
Tím Inžinieri

Andrej Gajdoš, Sebastián Janovčík, Sebastián Surovček, Matúš Capko



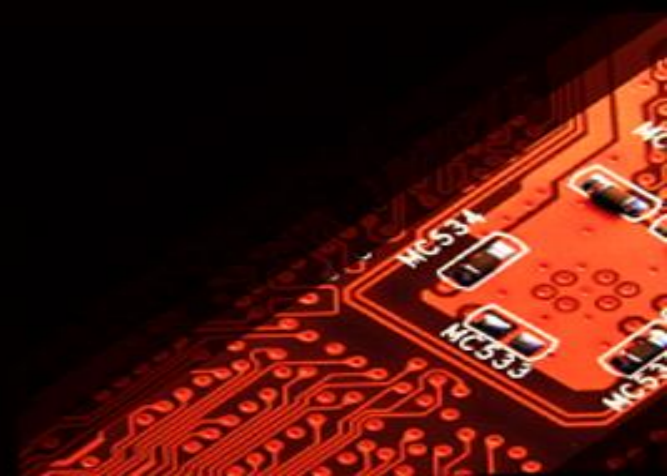
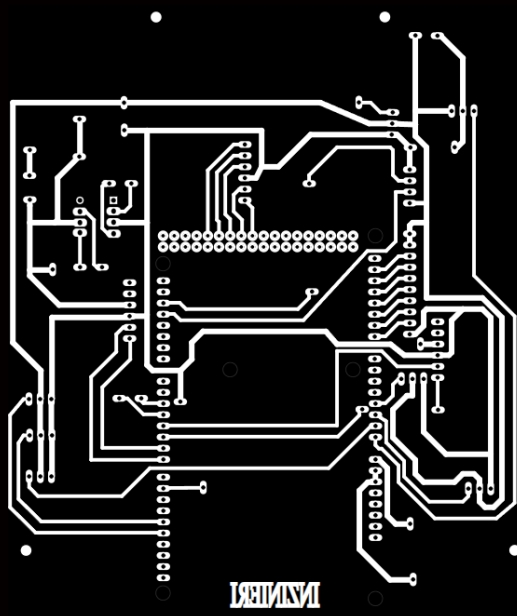
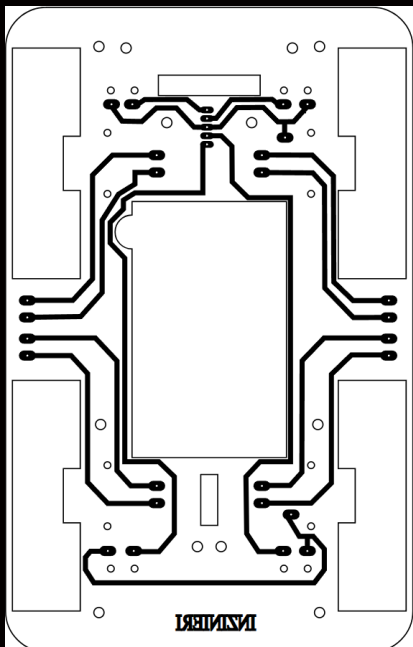
# 3D návrh robota

- Robot sme navrhovali v programe FreeCad
- Väčšina vecí sa vytlačila pomocou 3D tlačiarne
- Vrchná a spodná platforma (zelené) sa frézovala



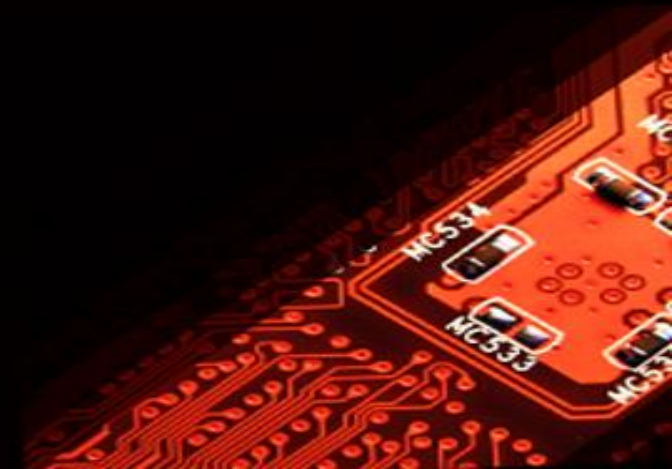
# Dosky plošného spoja

- Dps sme navrhovali v programe Autodesk Eagle a grafickom editore Inkscape
- Následne sme dps leptali



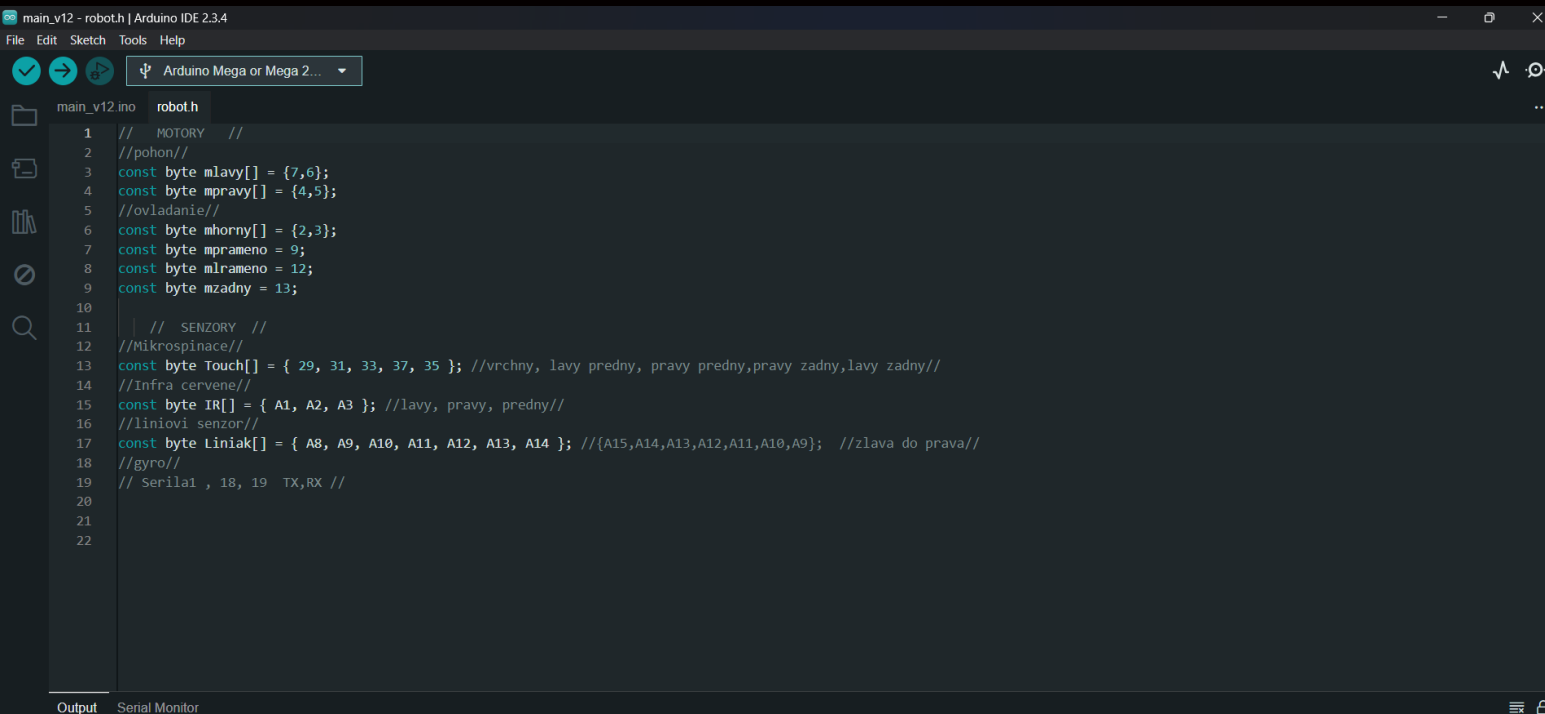
# Hardware

- Základná doska- Arduino Mega 2560
- Líniový senzor- vlastný
- Kamera- Pixy Cam v2.1
- Infračervené senzory- GP2Y0A41SK0F
- Motory- DC motor 6V/100rpm
- Motor driver- L9110
- Baterky- 18650 7,4V

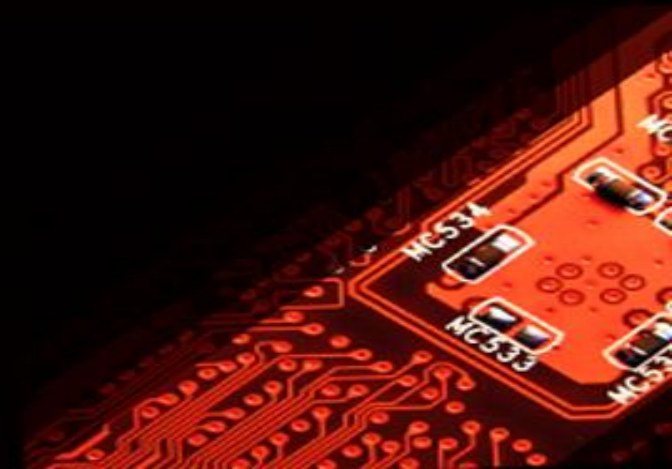


# Software

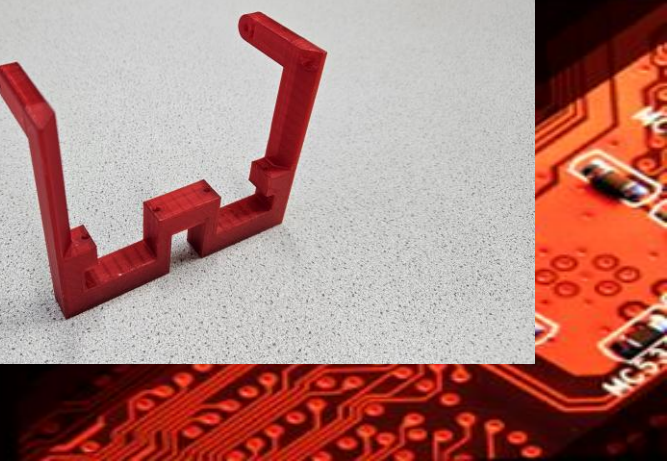
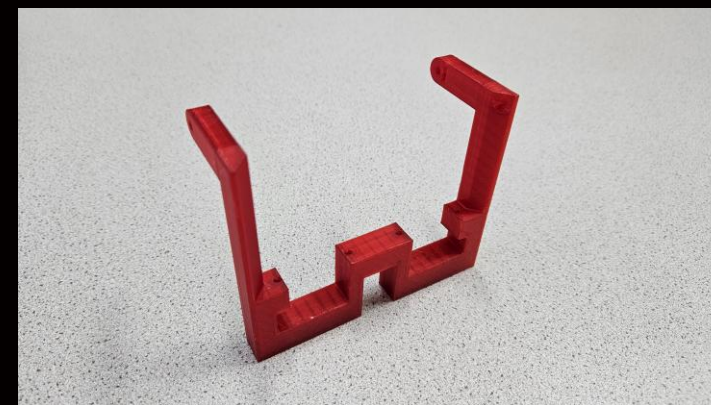
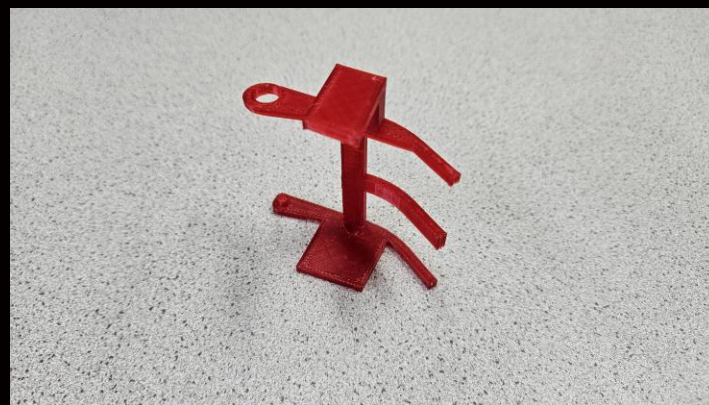
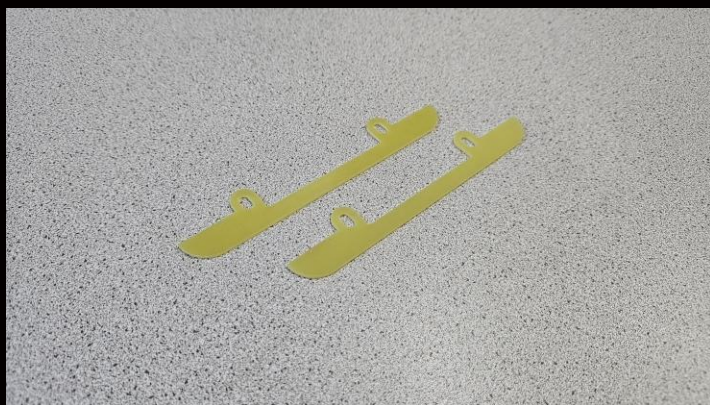
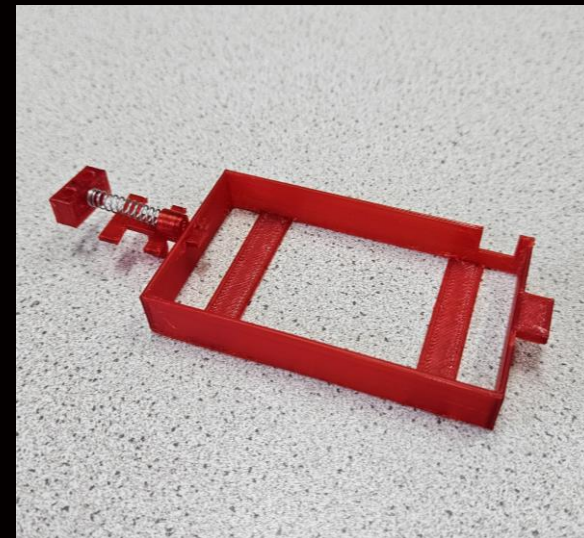
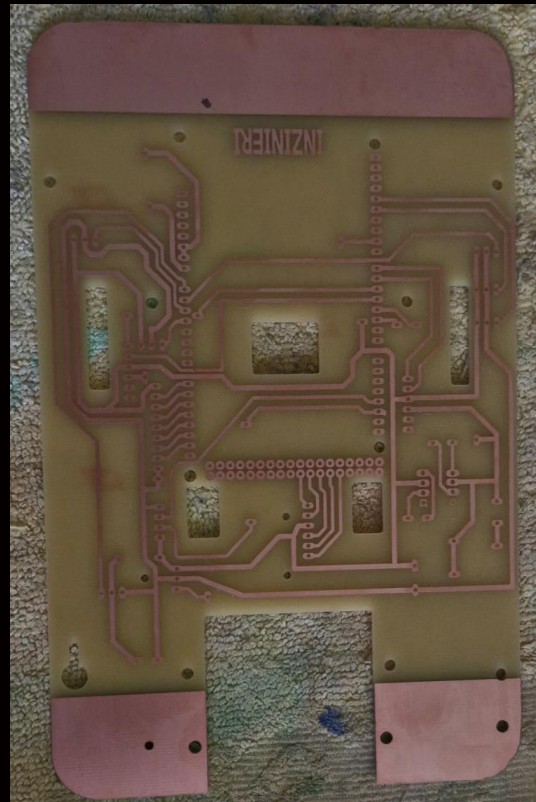
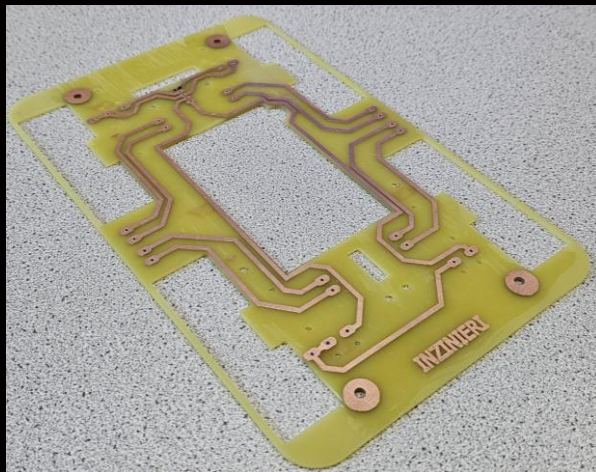
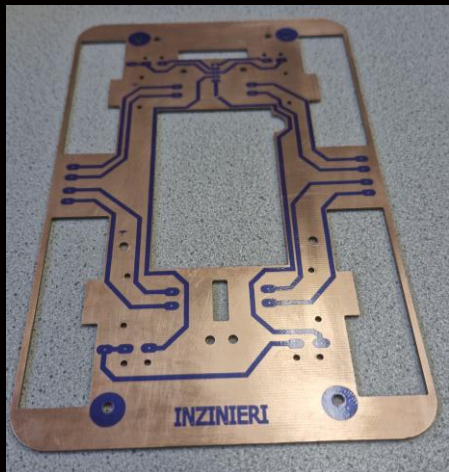
- Na programovanie sme používali program Arduino IDE a PixyMon



```
main_v12 - robot.h | Arduino IDE 2.3.4
File Edit Sketch Tools Help
Arduino Mega or Mega 2...
main_v12.ino robot.h
1 // MOTORY //
2 //pohon//
3 const byte mlavy[] = {7,6};
4 const byte mpravy[] = {4,5};
5 //ovladanie//
6 const byte mhorny[] = {2,3};
7 const byte mprameno = 9;
8 const byte mlrameno = 12;
9 const byte mzadny = 13;
10
11 // SENZORY //
12 //Mikrospinace//
13 const byte Touch[] = { 29, 31, 33, 37, 35 }; //vrchny, lavy predny, pravý predny,pravý zadny,lavy zadny//
14 //Infra cervene//
15 const byte IR[] = { A1, A2, A3 }; //lavy, pravý, predny//
16 //liniovi senzor//
17 const byte Liniak[] = { A8, A9, A10, A11, A12, A13, A14 }; //{A15,A14,A13,A12,A11,A10,A9}; //zlava do prava//
18 //gyro//
19 // Serila1 , 18, 19 TX,RX //
20
21
22
Output Serial Monitor
```



# Časti robota



**3D NÁVRH  
ROBOTA**

**FRÉZOVANIE  
PLATFORIEM**

**PROGRAMOVANIE**

**VYTLAČENIE BETA  
VERZIÍ SÚČIASTOK**

**LEPTANIE  
PLOŠNÝCH SPOJOV**