



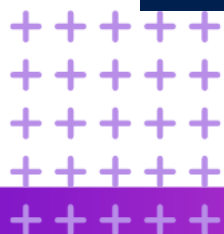
Blazor Conf 2022



Blazor 3000

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Freelance developer – Microsoft MVP - Nerd



Un grazie agli sponsor



E alle community che ci hanno supportato

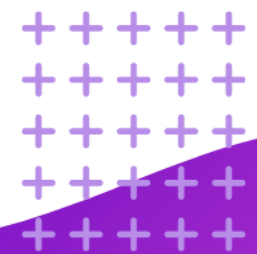


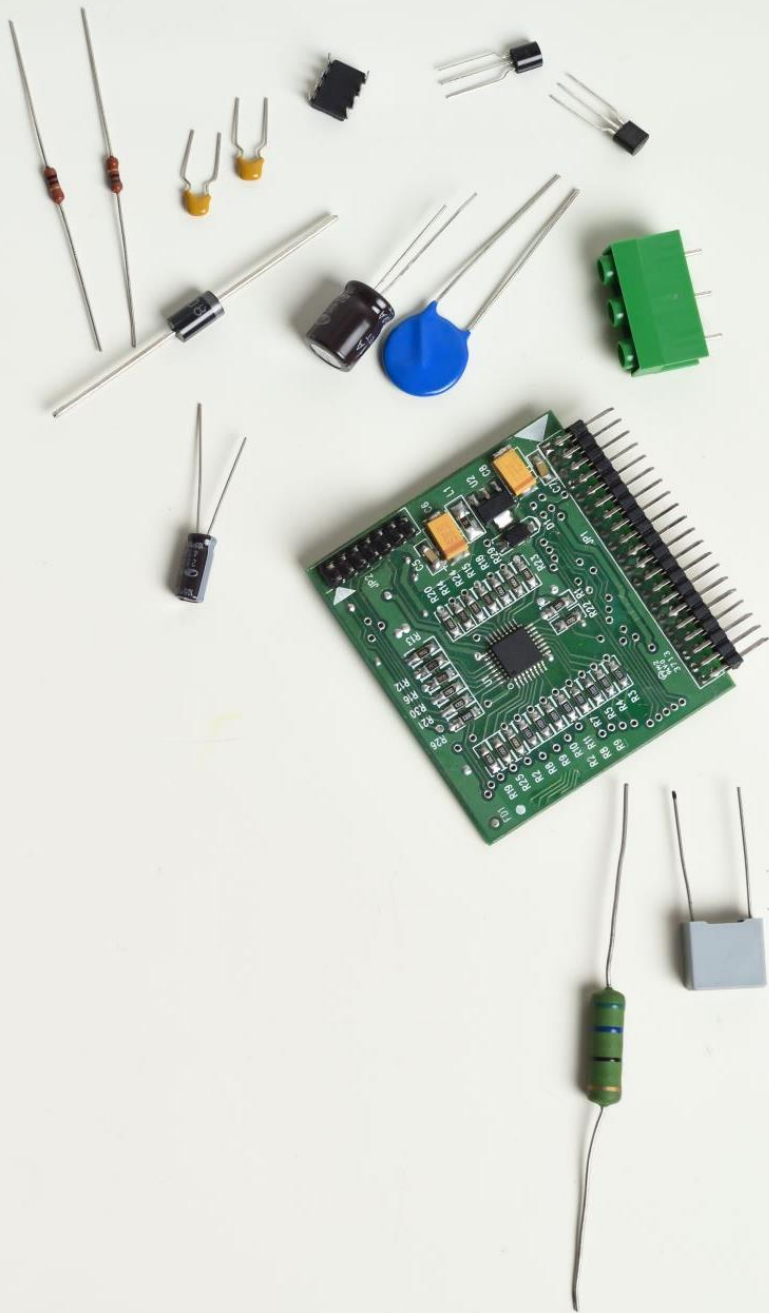
Agenda

- L'hardware
- Il software
- Scendiamo nel dettaglio
- Spunti di riflessione



Perché?





Cassetta degli attrezzi

- Raspberry 3
- Visual studio / Visual Studio Code
- Stampante 3d
- Hardware vario
- Bombolette spray
- Tanta tanta tanta pazienza
- Un pizzico di follia

Perché Raspberry pi3 b+?

Tutti usano arduino

Dotnet Core

E' possibile utilizzare anche la versione pi2 ma..

Abbiamo tutta la Potenza di cui abbiamo bisogno

Perché Blazor?

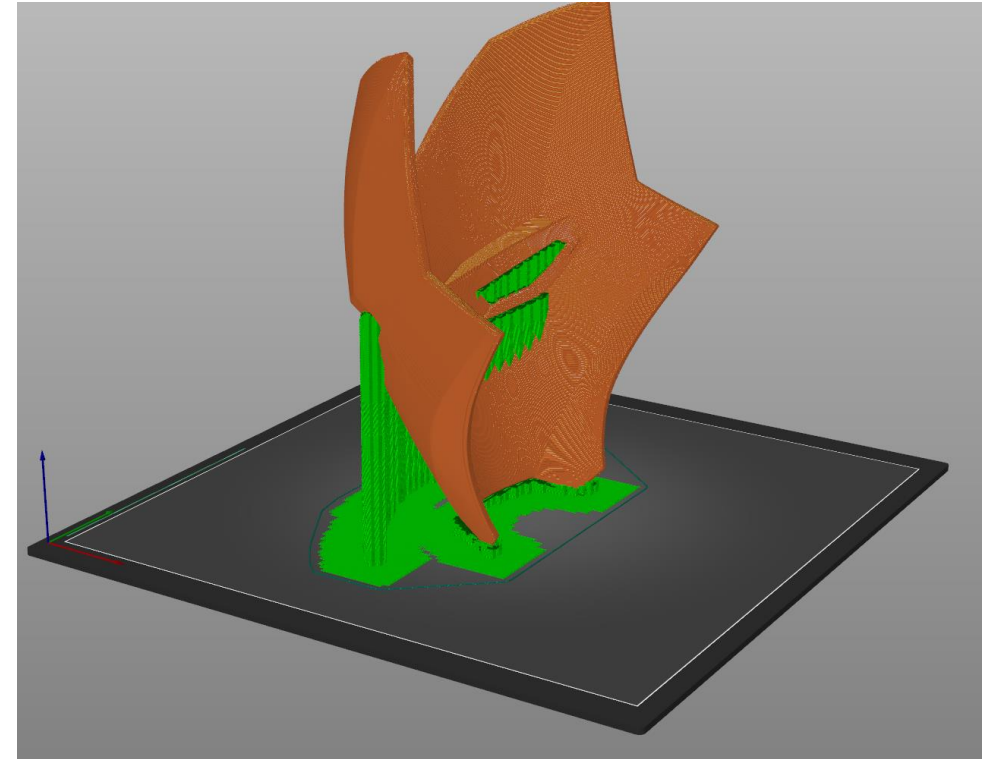
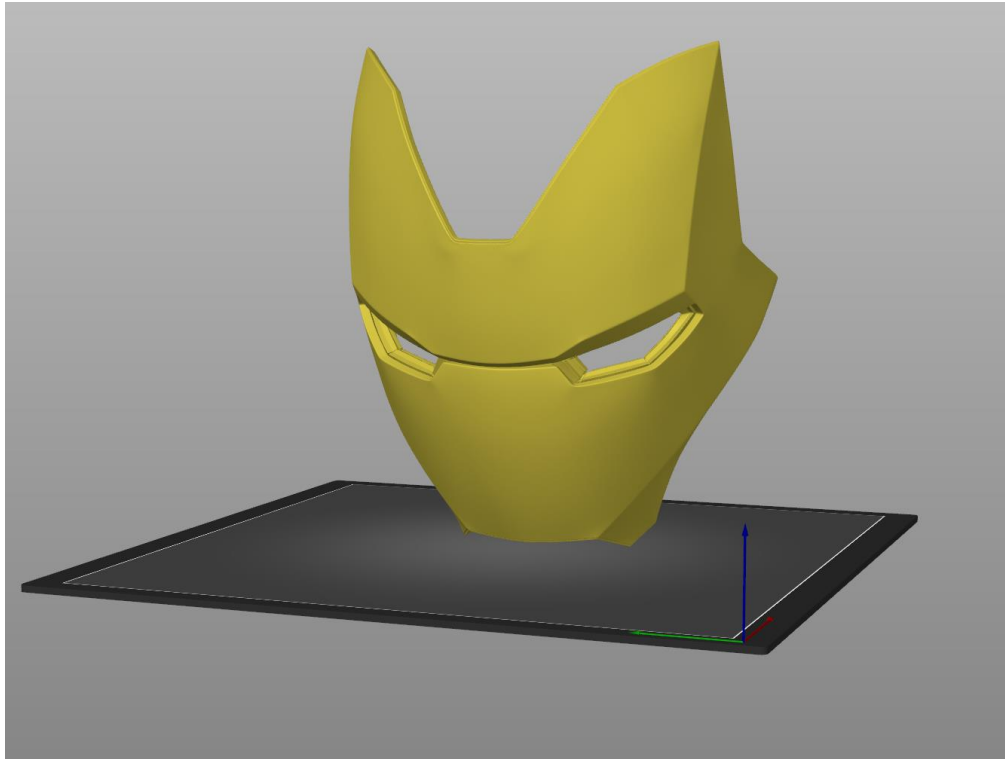
Riusabilità del codice

Dotnet Core

Compatibilità su raspberry

Interfaccia web senza necessità di installare altri web server

La stampa 3d



Olio di gomito!





Blazor Client VS Server

Scelta la versione client

- Performance (stiamo sempre parlando di un raspberry)
- Creazione di API condivise

Installare dotnet core

Da Bash lanciamo

```
curl -sSL https://dot.net/v1/dotnet-install.sh | bash /dev/stdin --channel  
Current
```

```
echo 'export DOTNET_ROOT=$HOME/.dotnet' >> ~/.bashrc
```

```
echo 'export PATH=$PATH:$HOME/.dotnet' >> ~/.bashrc
```


```
source ~/.bashrc
```

```
dotnet --version
```

Deployare una self contained app

```
dotnet publish -r linux-arm -c Release -o c:\temp\a
```

Publish

 Publish

Connection

Settings

FolderProfile *

Configuration: Release

Target Framework: net6.0

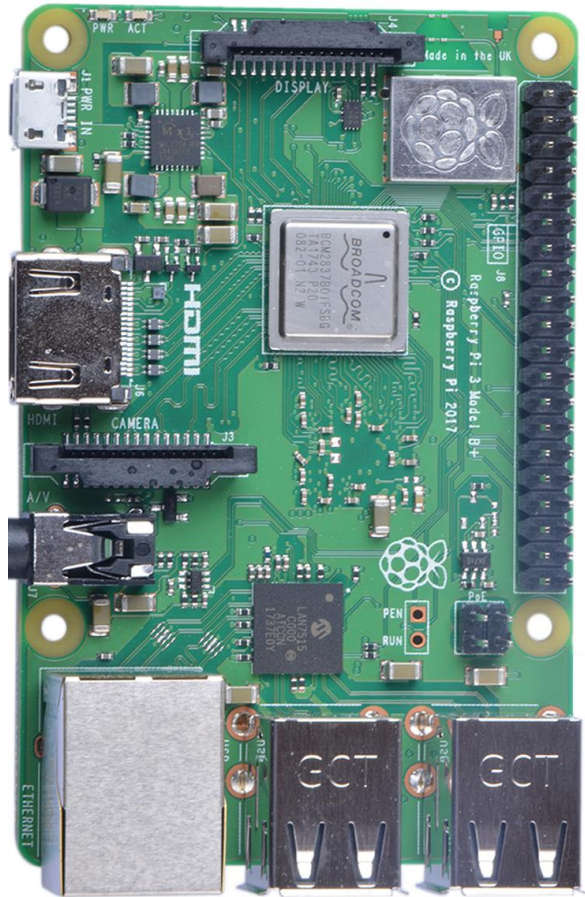
Deployment Mode: Self-contained
[Learn about deployment modes](#)

Target Runtime: linux-arm

File Publish Options

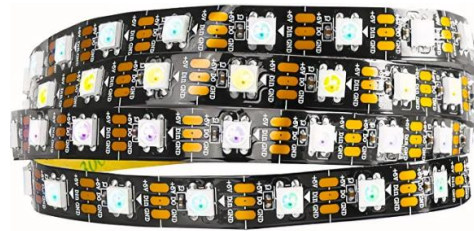
Databases

Hardware

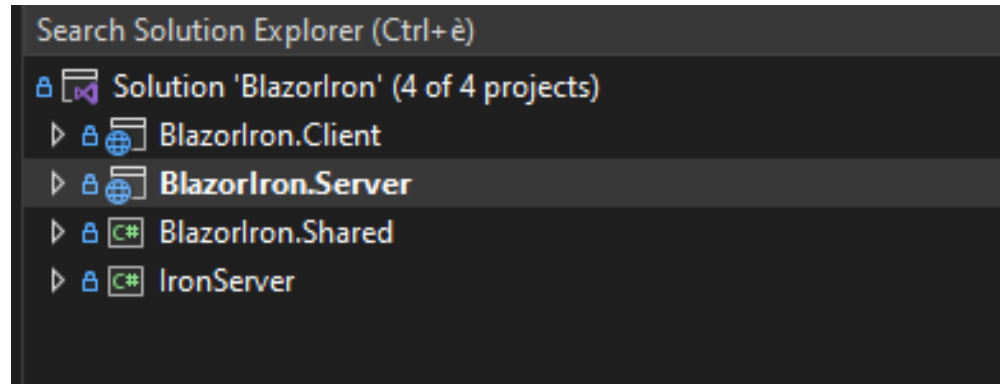


1		5v
2		5v
3		GND
4		
5	GND	
6	17 (EYES)	18 PWM (SERVO 1)
7		
8		
9		
10	19 SPI (LED)	
11		
12		
13		
14		
15		
16		
17		
18	19 PWM (SERVO 2)	
19		
20	GND	

Hardware - 2



Il progetto



Progetto client Blazor

Progetto server Dotnet Core

Libreria condivisa

Applicazione console controlli vocali ecc

Le librerie

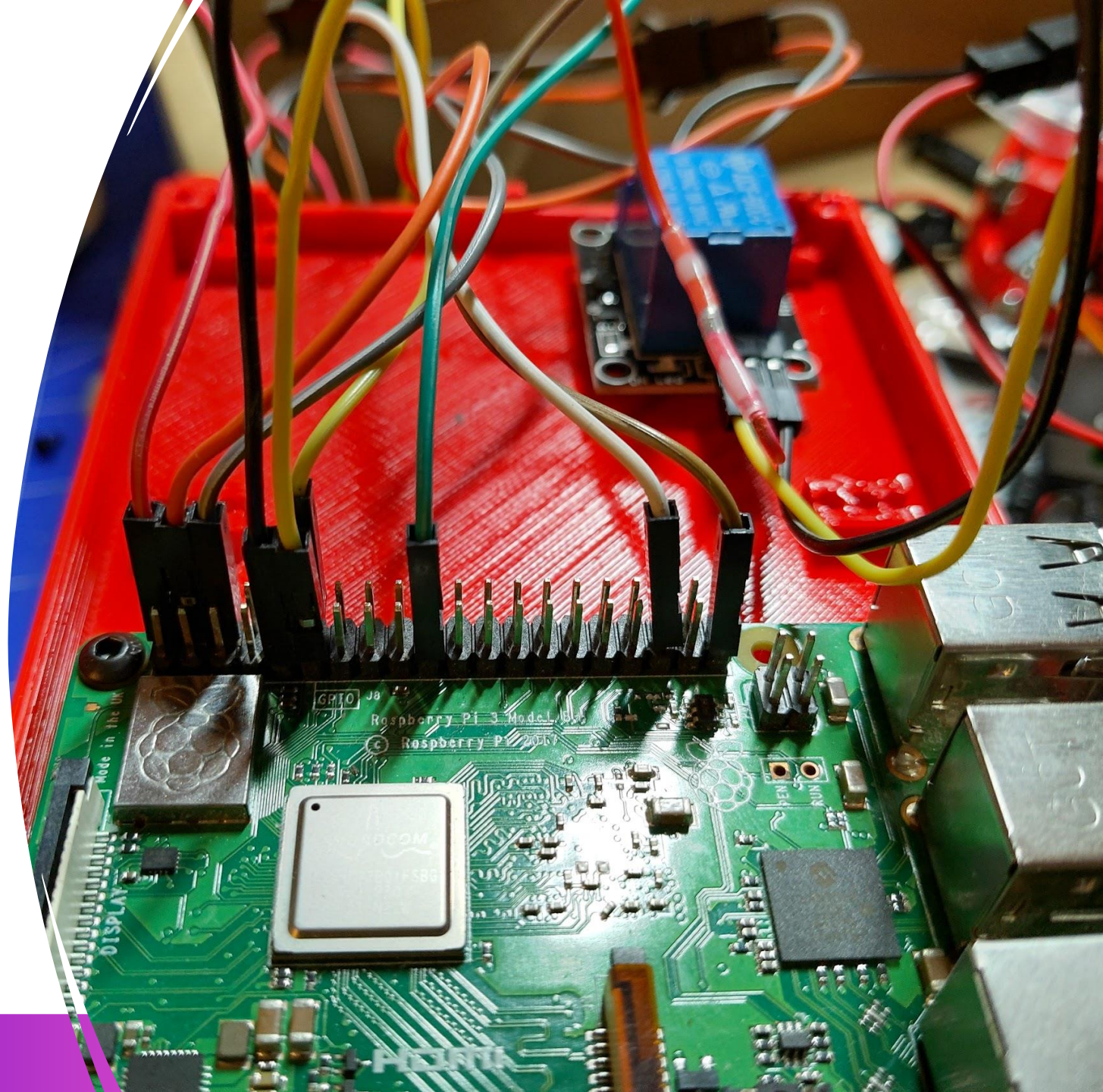
lot.Device.Bindings

System.Device.Gpio

Microsoft.CognitiveServices.Speech

NetCoreAudio

Risultato





Demo

Qui potete scrivere qualcosa sulla demo o quello che volete

Spunti di riflessioni - config

```
"IronSettings": {  
  "AngleOpenMotor1": 160,  
  "AngleOpenMotor2": 20,  
  "AngleCloseMotor1": 0,  
  "AngleCloseMotor2": 180,  
  "MinimumPulse": 500,  
  "MaximumPulse": 2000,  
  "MotorSpeed": 10,  
  "EyeSwitchLed": 17,  
  "MotorSleep": 25,  
  "HelmetLed1Pos": 0,  
  "HelmetLed2Pos": 1,  
  "HelmetLedColor": "Blue"  
}
```


Spunti di riflessioni – avviare app in automatico

Systemd

Creare un file `MyWebApp.service` in `/lib/systemd/system/`

```
[Unit]
Description=My ASP.NET Core Web App
After=nginx.service

[Service]
Type=simple
User=pi
WorkingDirectory=/home/pi/apps/MyWebApp
ExecStart=/home/pi/apps/MyWebApp/MyWebApp
Restart=always

[Install]
WantedBy=multi-user.target
```

```
sudo systemctl enable MyWebApp
sudo systemctl start MyWebApp
```

Spunti di riflessioni – esporre il servizio web

Nginx

Editare file `/etc/nginx/sites-available/default`

```
location / {  
    proxy_pass http://localhost:5000/  
    proxy_http_version 1.1;  
    proxy_set_header Connection keep-alive;  
}
```

+++++

<https://thomaslevesque.com/2018/04/17/hosting-an-asp-net-core-2-application-on-a-raspberry-pi/>



Work in
progress

Link

<https://github.com/a-iafrate/BlazorIron>

<https://www.endycahyono.com/article/hosting-blazor-webassembly-in-nginx>

<https://thomaslevesque.com/2018/04/17/hosting-an-asp-net-core-2-application-on-a-raspberry-pi/>

<https://github.com/dotnet/iot/blob/cf3887b5605a96ab7fe78517f6773789ba930385/src/devices/Ws28xx/README.md>

<https://www.electronicshub.org/control-a-relay-using-raspberry-pi/>

[https://docs.microsoft.com/en-us/dotnet/iot/deployment?msclkid=0bce6c5cbb0611ec9226eabb1b8eba96](https://docs.microsoft.com/en-us/dotnet/iot/deployment?msclkid=0bce6c5cbb0611ec9226eabb1b8eba96ba96)



Domande?



Chi sono

Alessio Iafrate

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