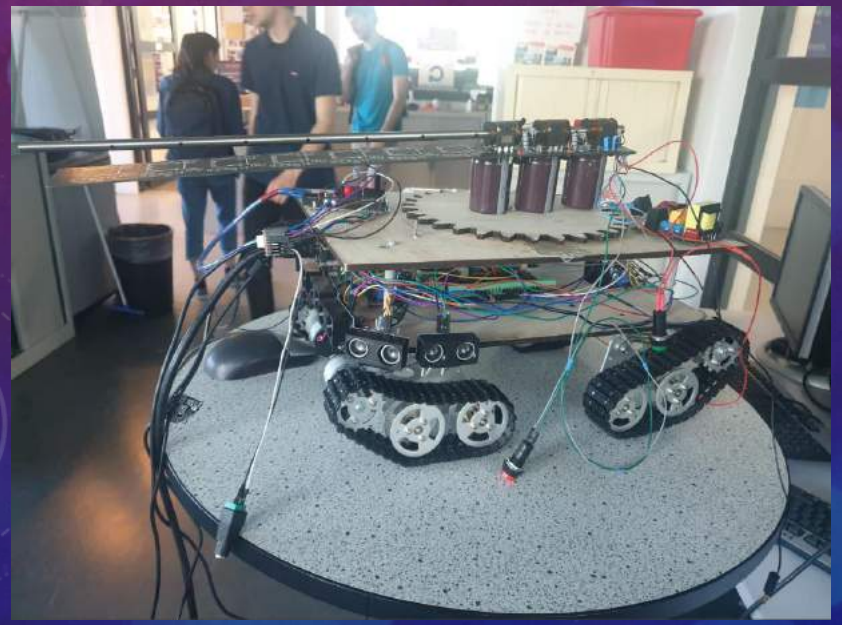
POLYTECH NICE SOPHIA

UNIVERSITÉ CÔTE D'AZUR

ETUDIANTS : CONSALVI NICOLAS & MIRI YOUSSEF
ENCADRANTS : PASCAL MASSON

MILITECH



PRÉSENTATION DU ROBOT ET DE SES OBJECTIFS

1. Navigation dans l'espace:

Deux modes:

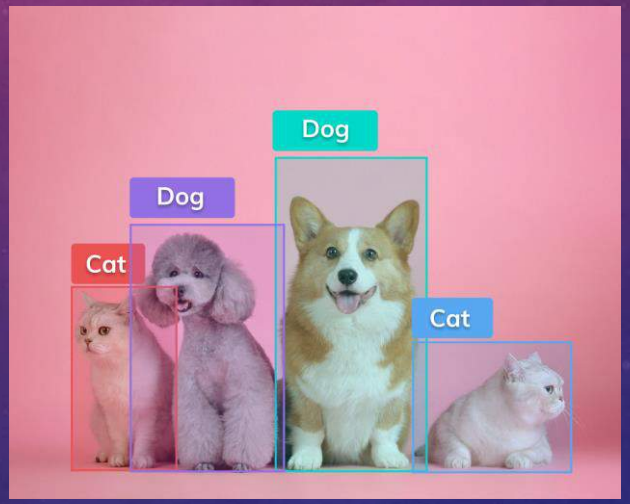
-Mode autonome

-Mode dirigé par Bluetooth

2.Détection:

-Détection d'objets

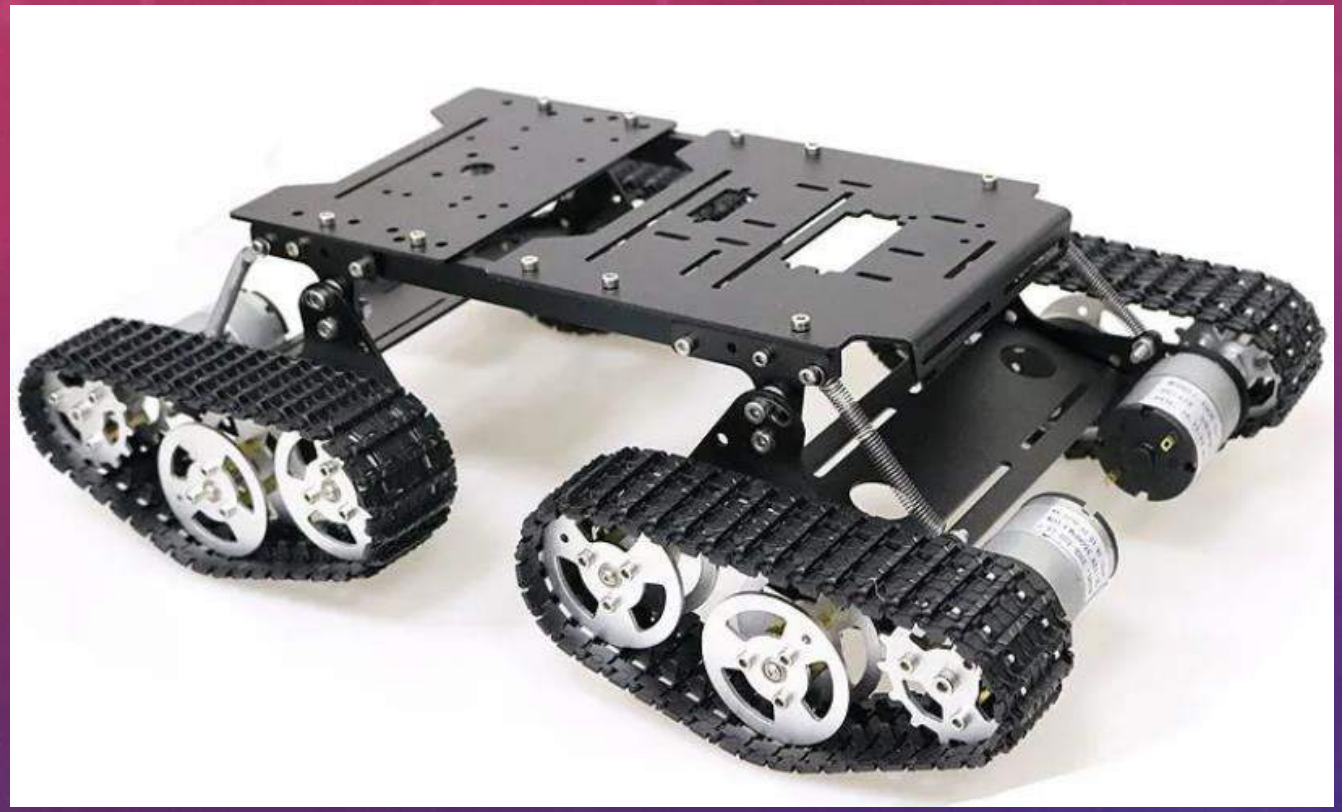
-entrainement d'une Intelligence artificielle



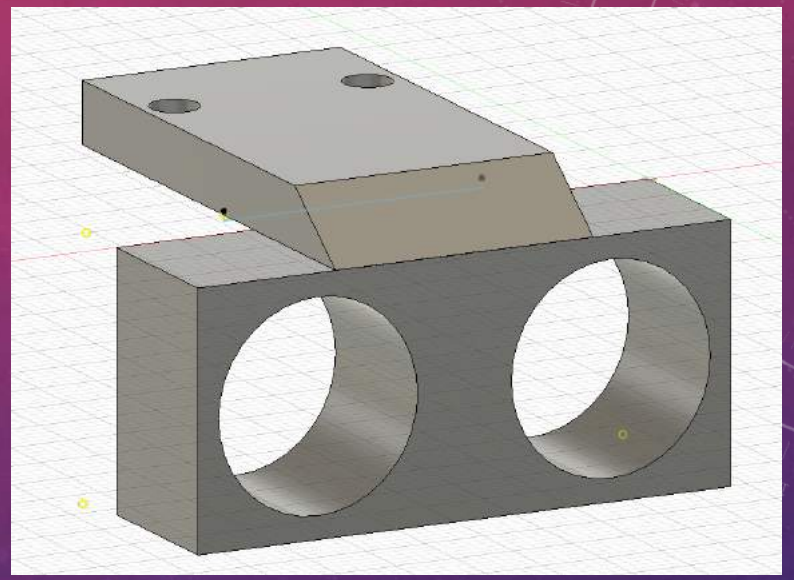
3.Neutralisation:

-Canon électromagnétique monté sur tourelle

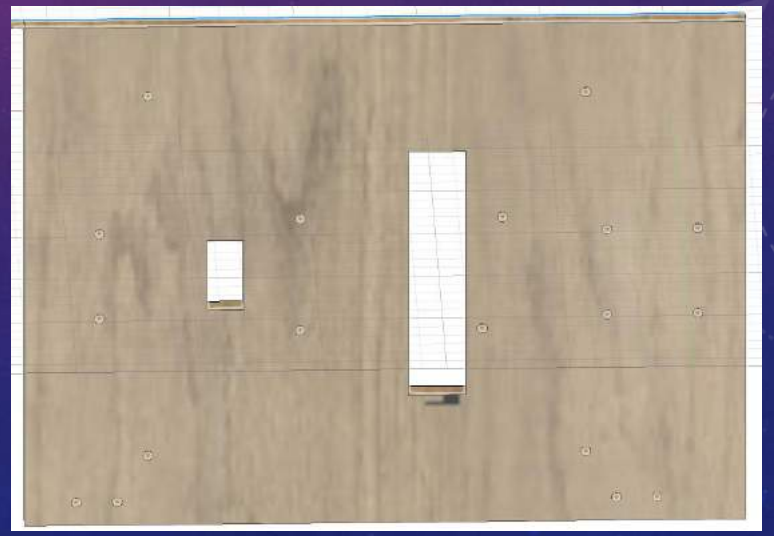
CONCEPTION DU CHÂSSIS



CHÂSSIS EN ALUMINIUM MONTÉ



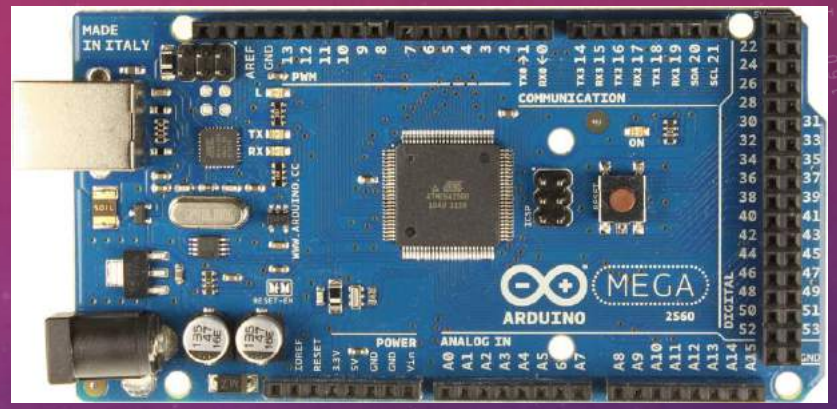
RÉALISATION DE SUPPORTS POUR CAPTEURS À ULTRASONS



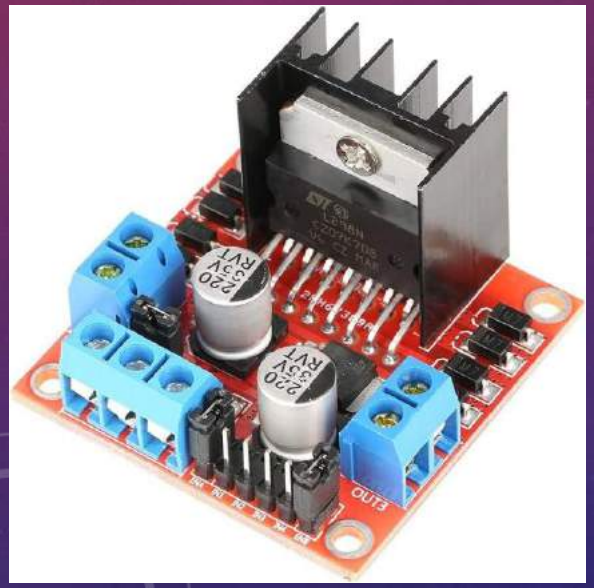
MODÉLISATION PLANCHE EN BOIS ÉTAGE 1 ET 2

MOTORISATION

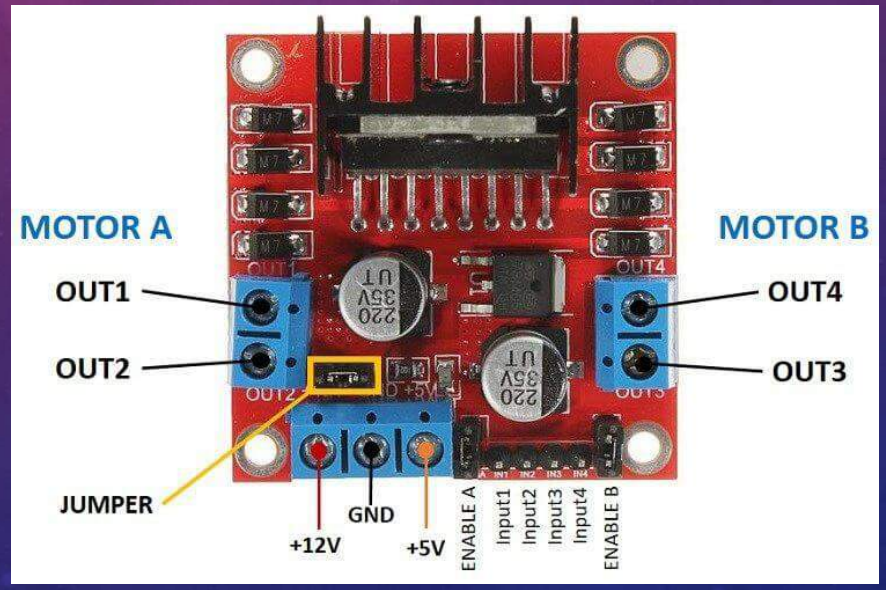
4 MOTEURS AC 12V



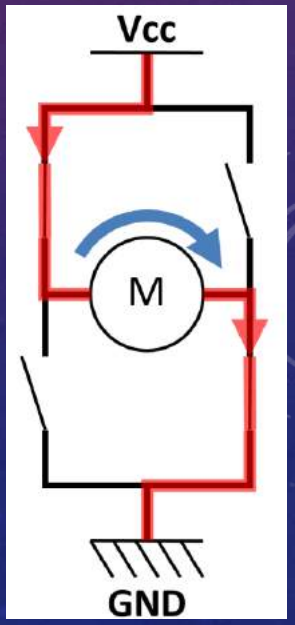
CARTE DE CONTRÔLE MEGA



2 PONTS EN H L298N-DUAL

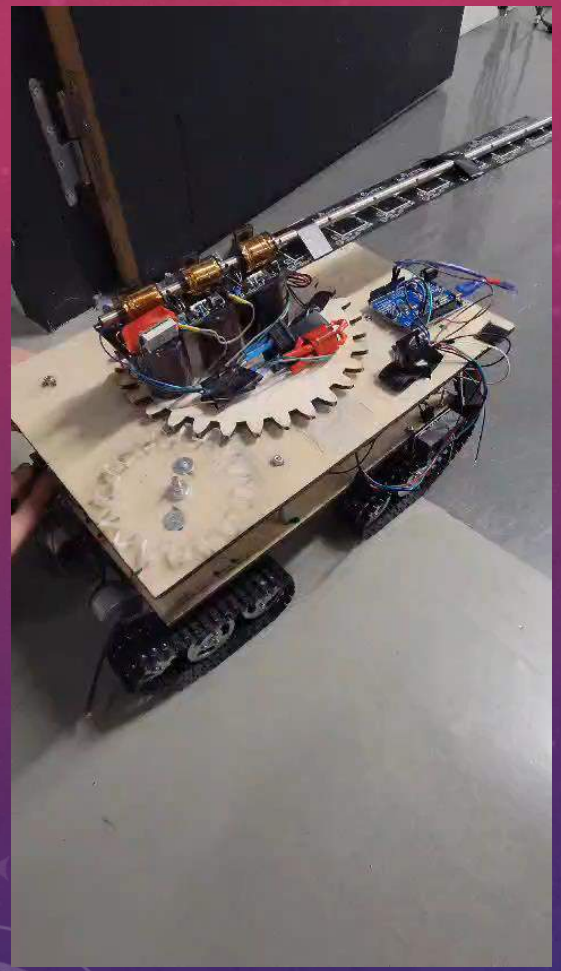


BRANCHEMENTS L298N-DUAL

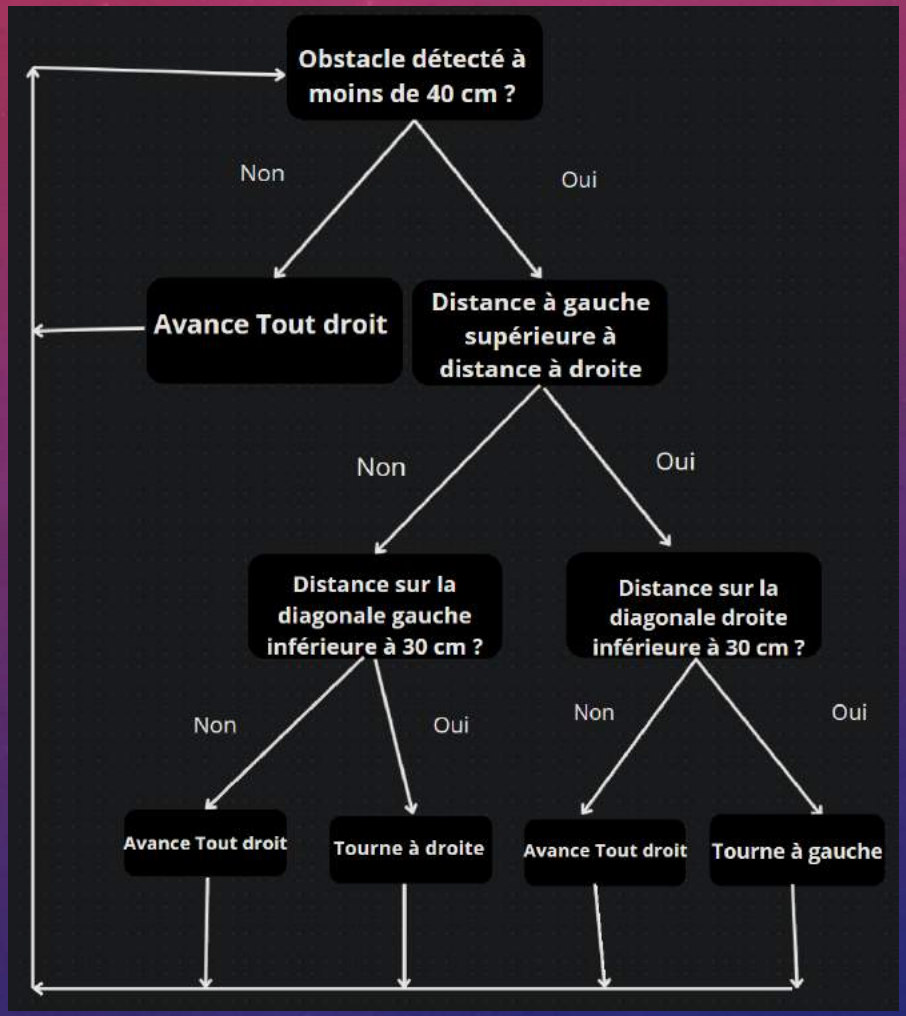


INVERSION DU SENS DE ROTATION

DÉTECTION D'OBSTACLE

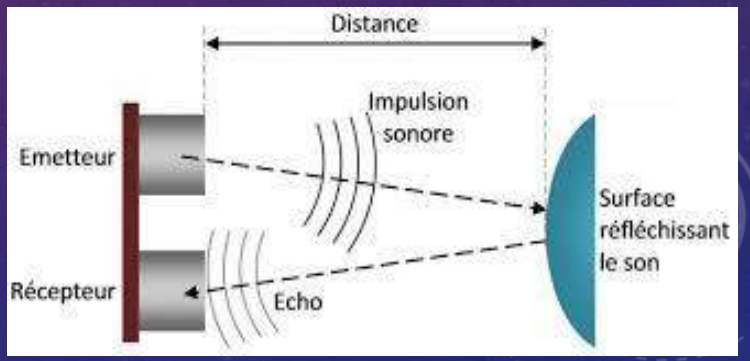


VIDÉO MONTRANT MILITECH RÉALISANT L'ALGORITHME DE DÉTECTION D'OBSTACLE



ALGORITHME DE DÉTECTION D'OBSTACLE

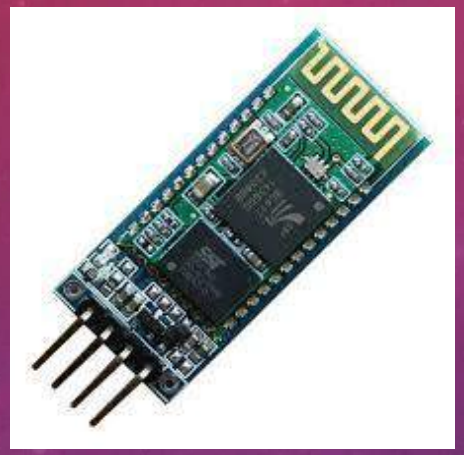
7 MODULES HCSR04



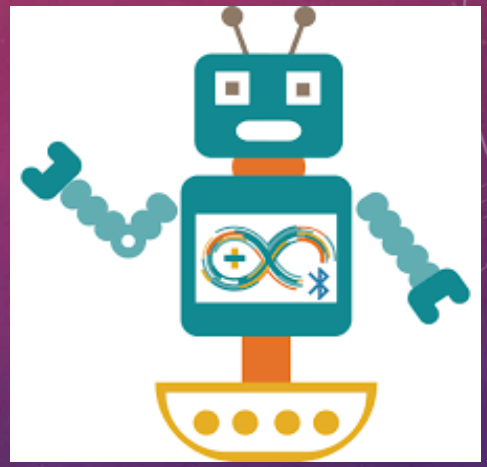
FONCTIONNEMENT DU CAPTEUR À ULTRASON

BLUETOOTH

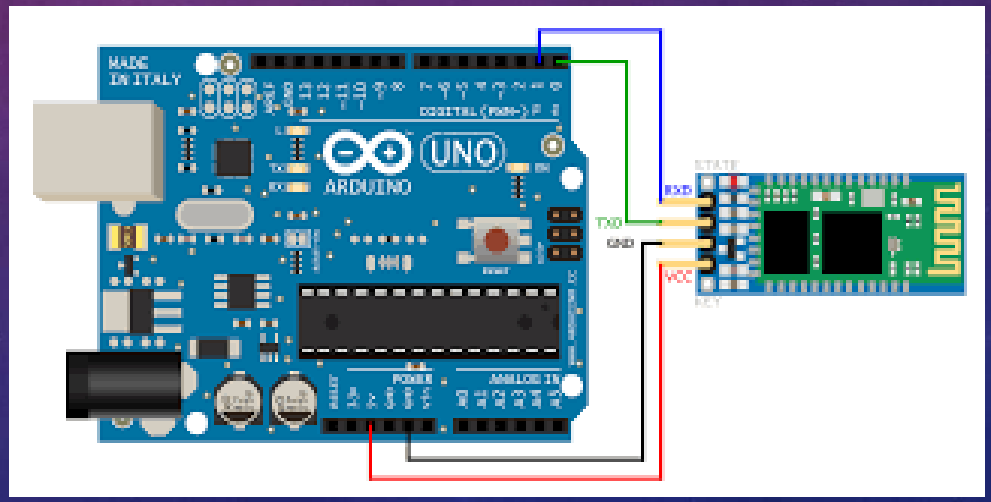
VIDÉO MONTRANT MILITECH CONTRÔLÉ PAR BLUETOOTH



1 MODULE HC05



APPLICATION ARDUINO BLUETOOTH CONTROLLER



BRANCHEMENTS HC05

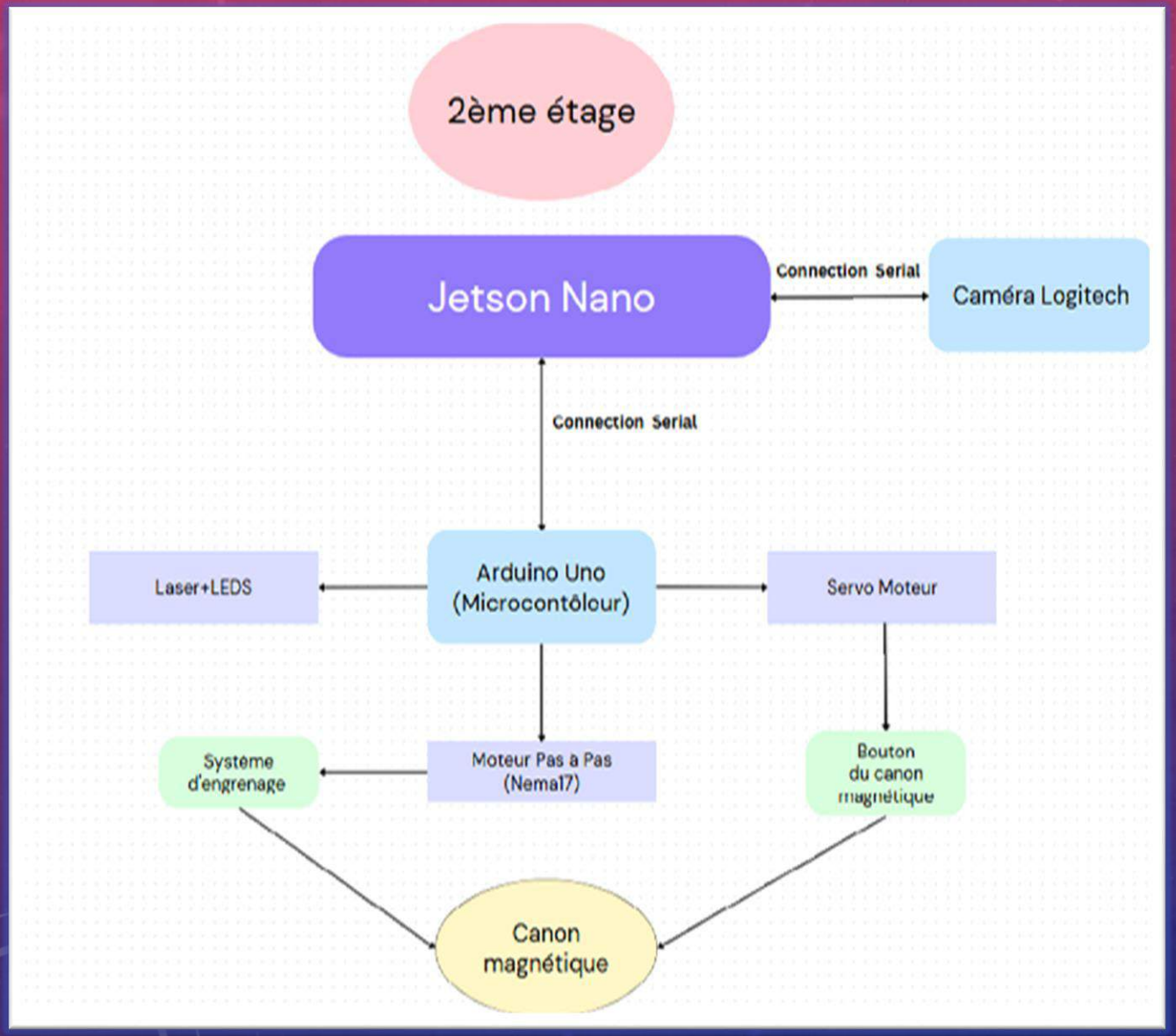
INTELLIGENCE ARTIFICIELLE

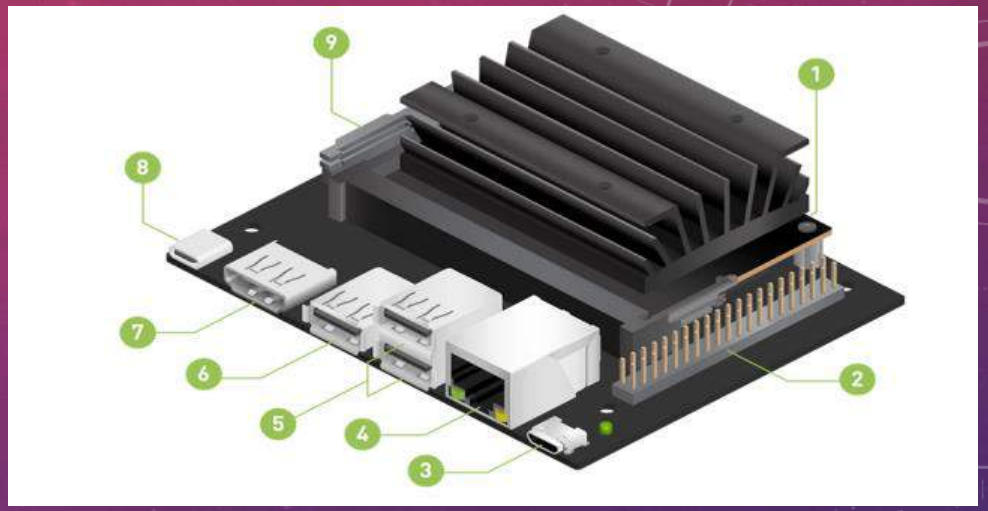
APERÇU GLOBAL

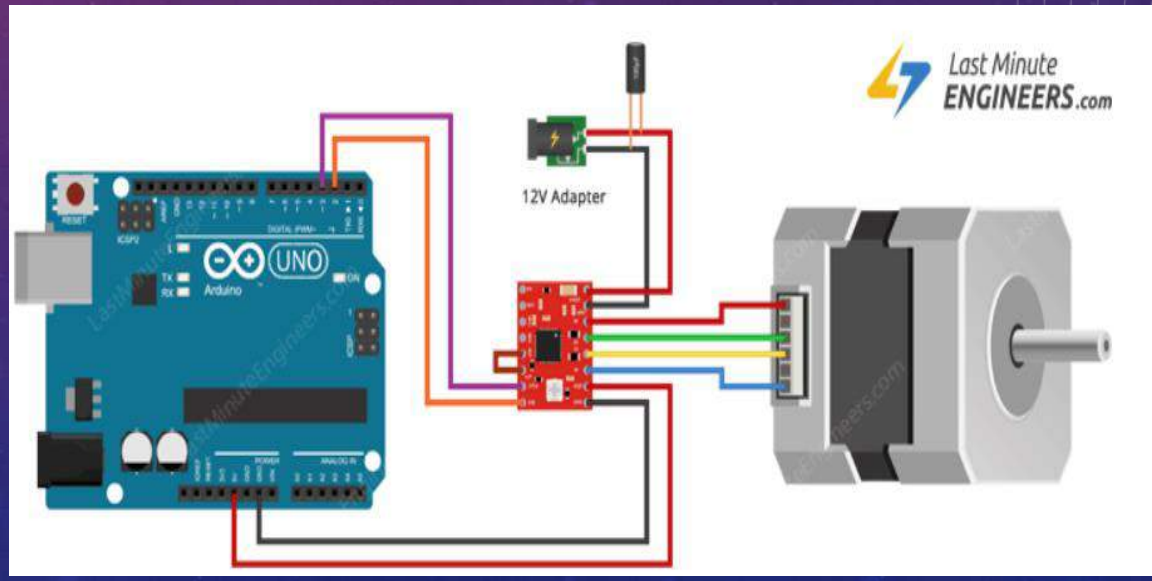
- Contrôle de la tourelle
- Détection de la cible
- Activer le canon magnétique
- Contrôle des leds

Démonstration

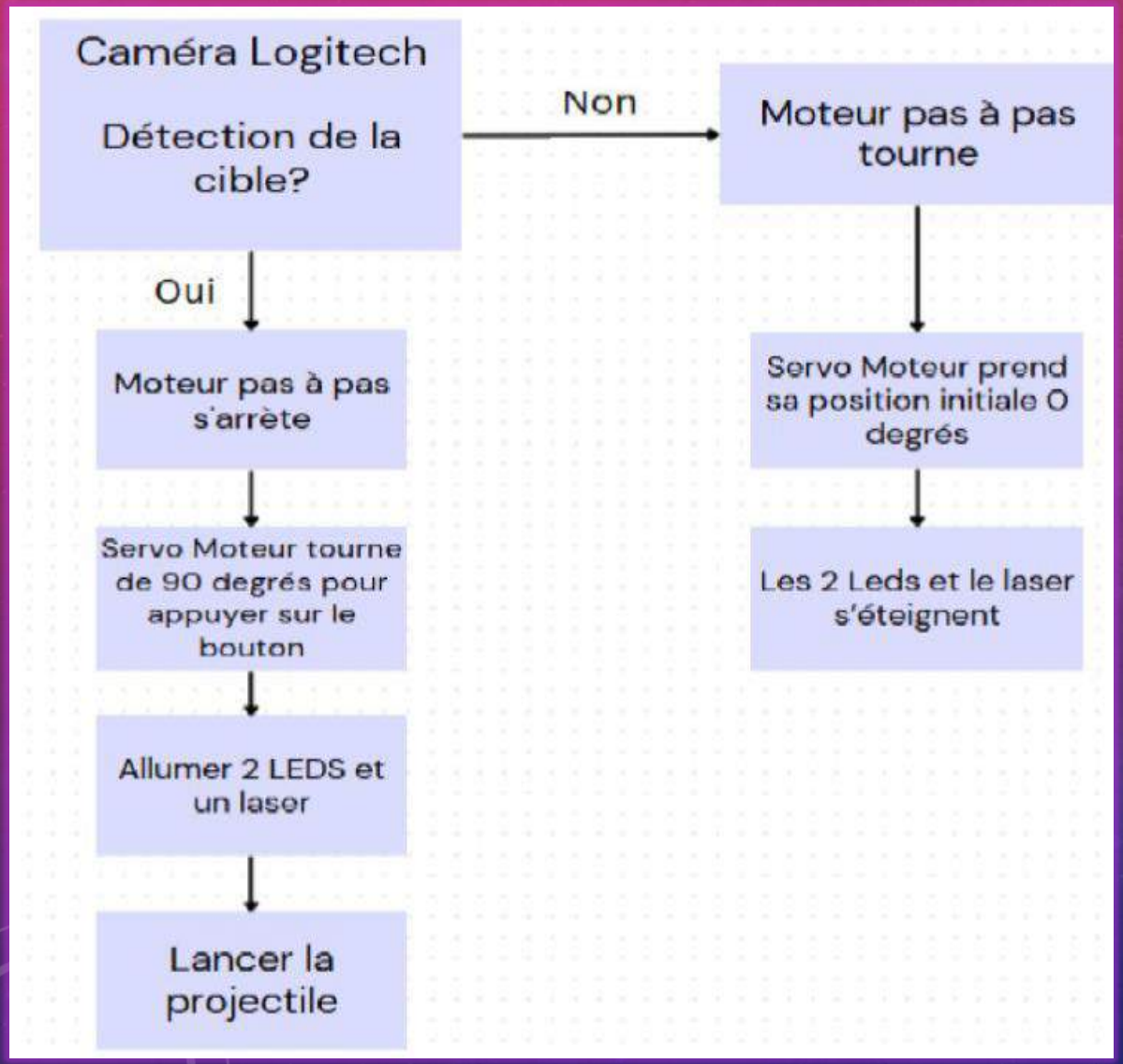
Synoptique de l’architecture

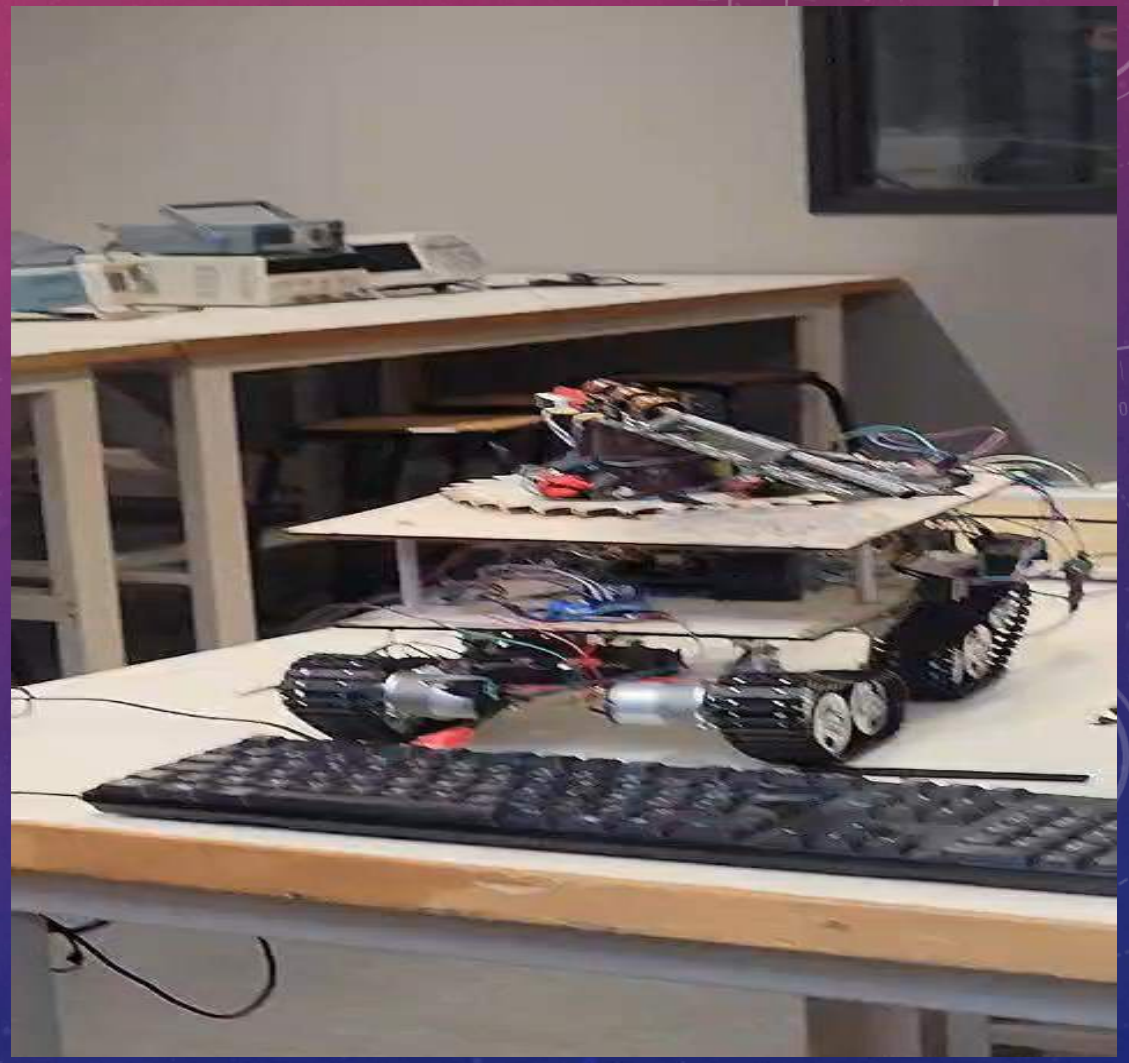




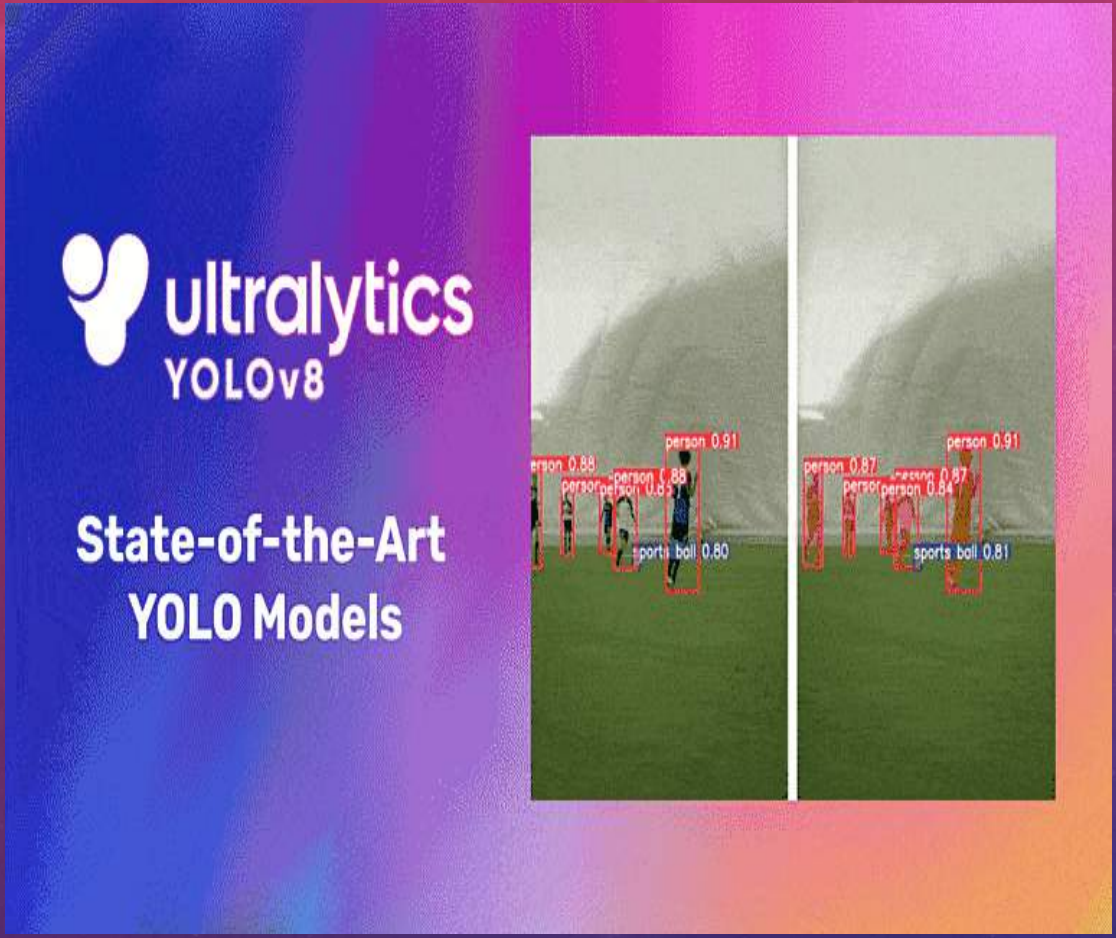


Machine à état





Modèle Entrainé:YOLOV8



YoussefMiriXX commented last month

Thank you so much, @glenn-jocher.
I managed to deploy a custom trained yolov8 model on my jetson using the GPU, i got 17 fps, which is not that bad for my robot.

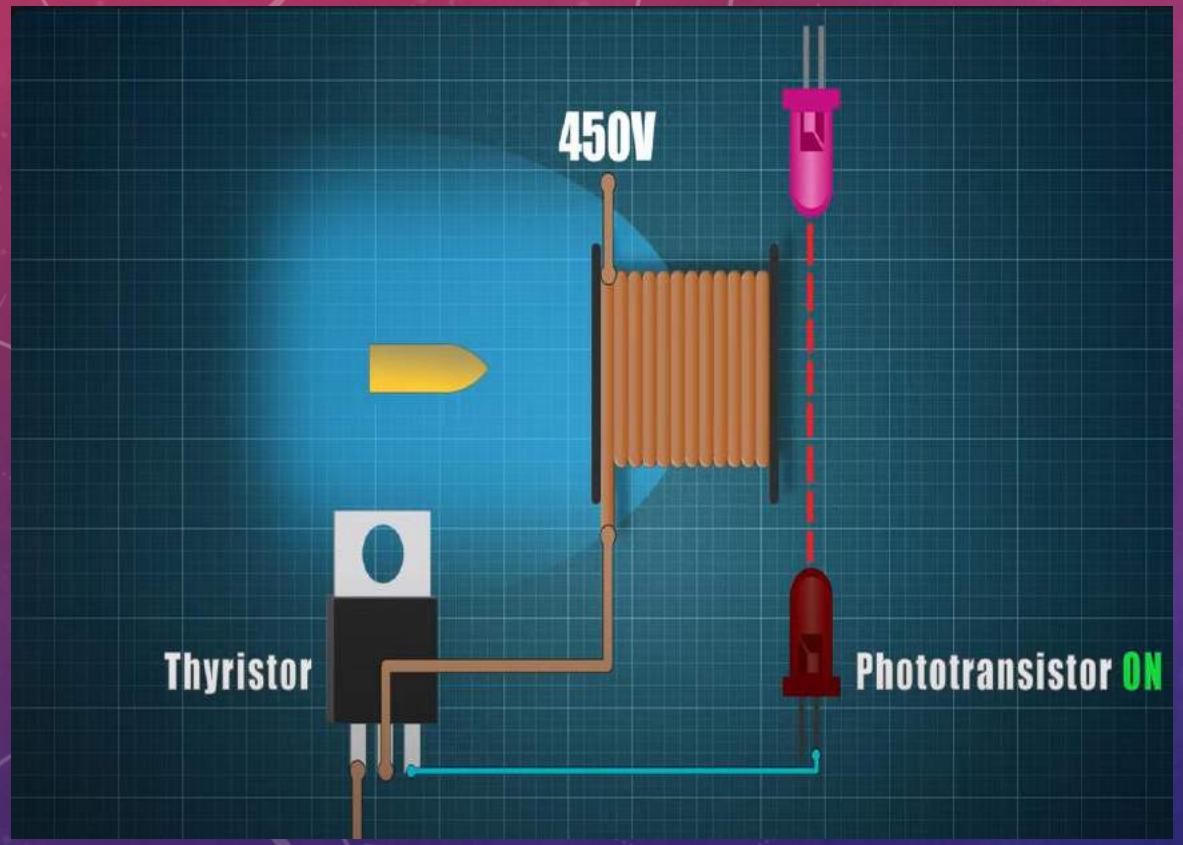
glenn-jocher commented last month — Member

@YoussefMiriXX that's wonderful to hear! 🌟 Achieving 17 fps on your Jetson with a custom trained YOLOv8 model is quite impressive, especially for robotics applications. If you need any more help or have further insights to share, don't hesitate to reach out. Happy building! 🚀

CANON ÉLECTRO-MAGNÉTIQUE

Comment ça fonctionne?

Activé



Désactivé