

Arduinobot

Introduction

Setup

Digital
Twin

ROS 2

Control

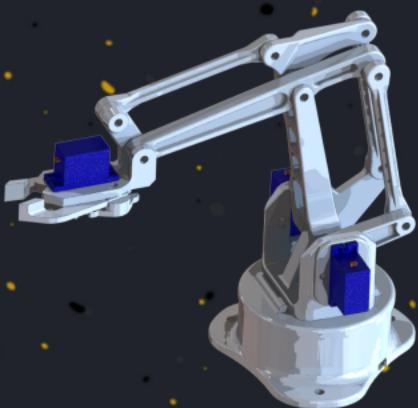
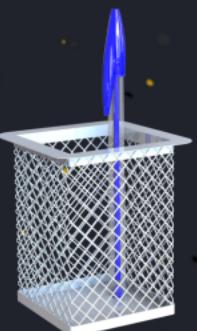
Kinematics

Application

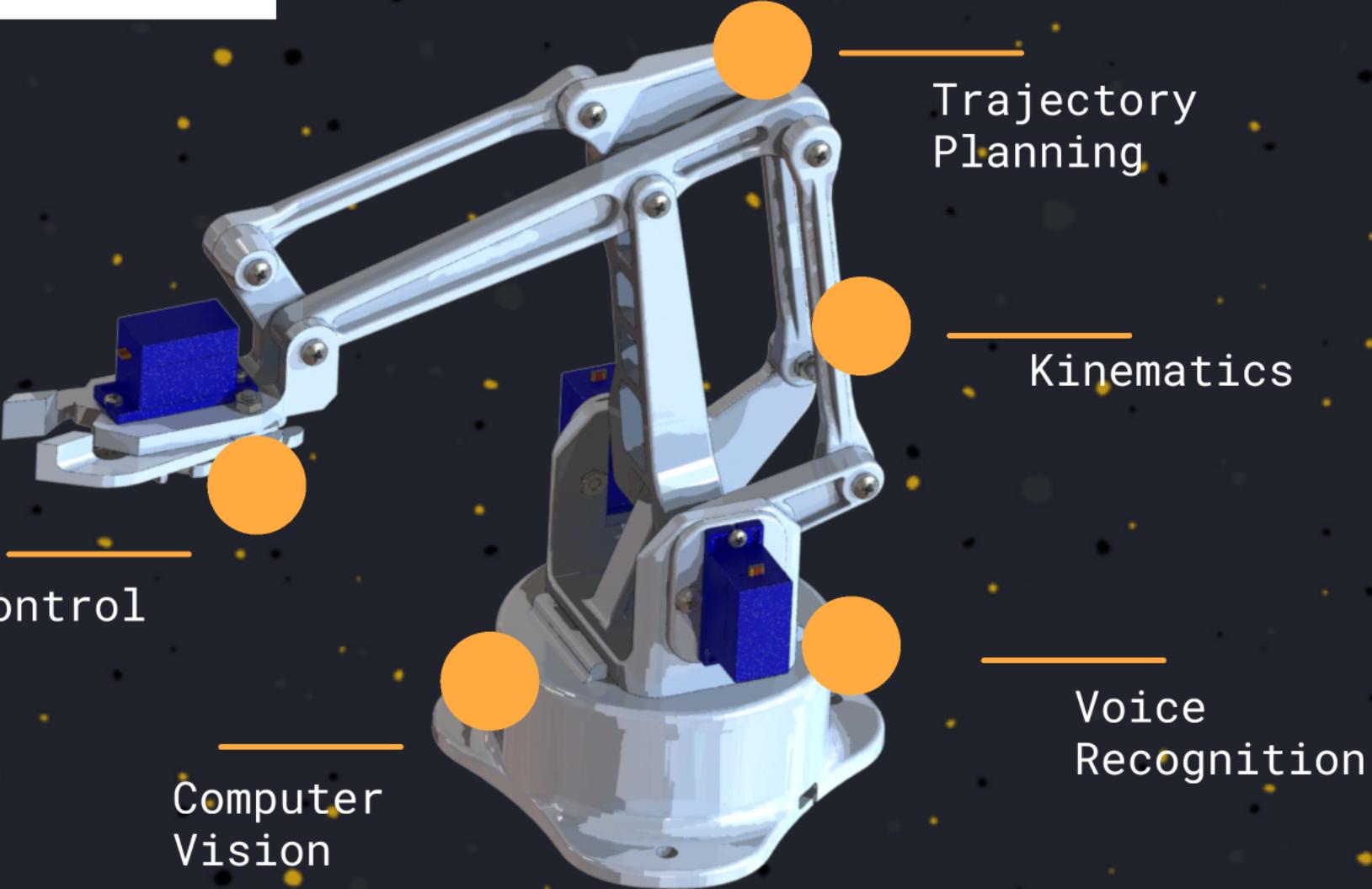
Alexa

Conclusions

Build



ROS 2

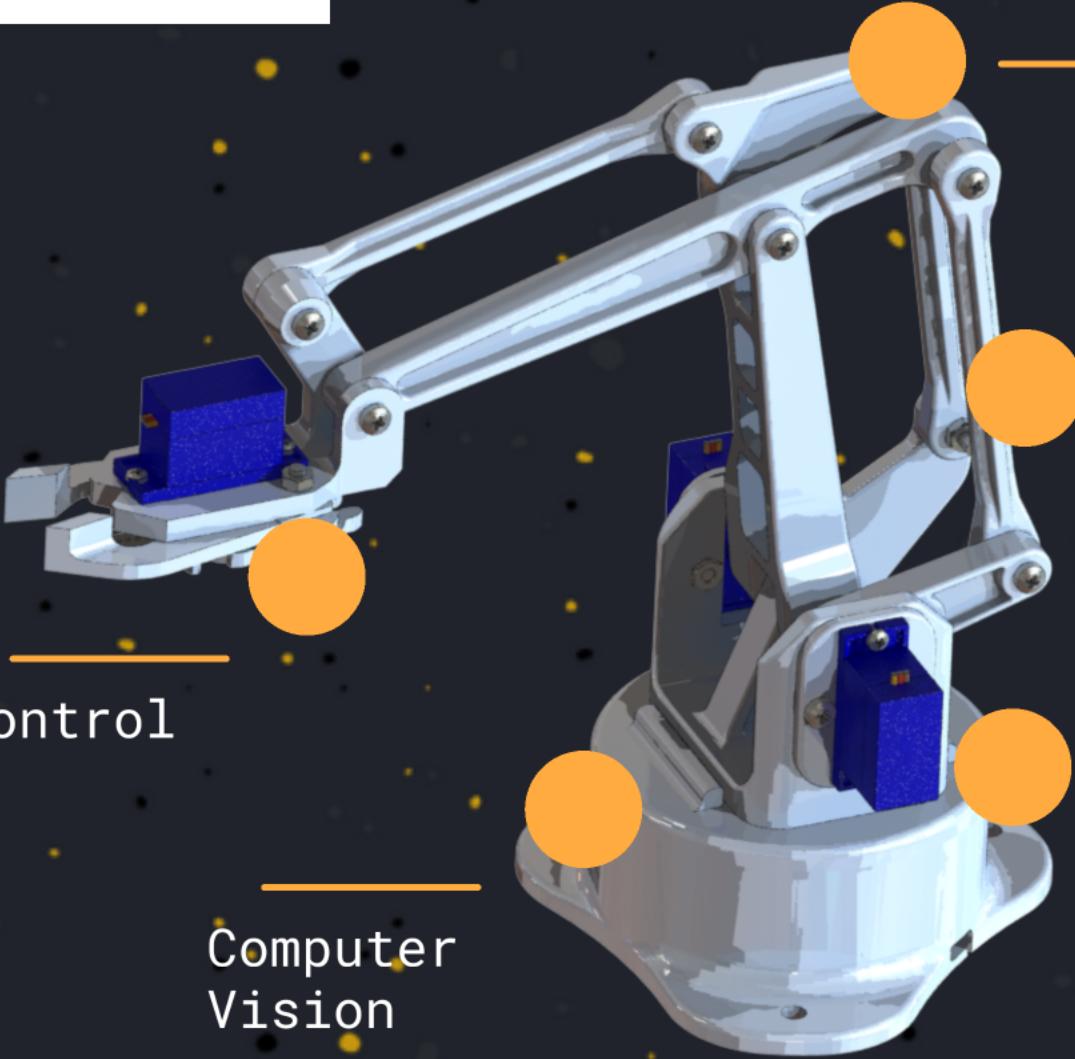


ROS 2



Control

Computer
Vision



Trajectory
Planning

Kinematics

Voice
Recognition



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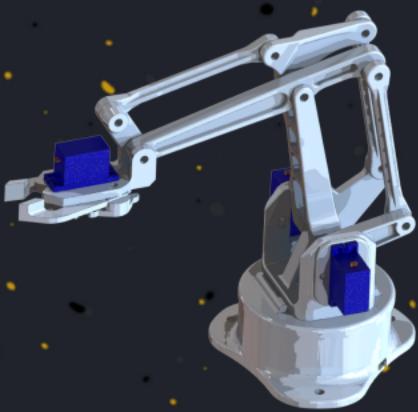
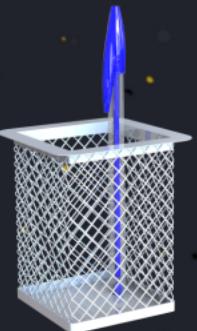
Kinematics

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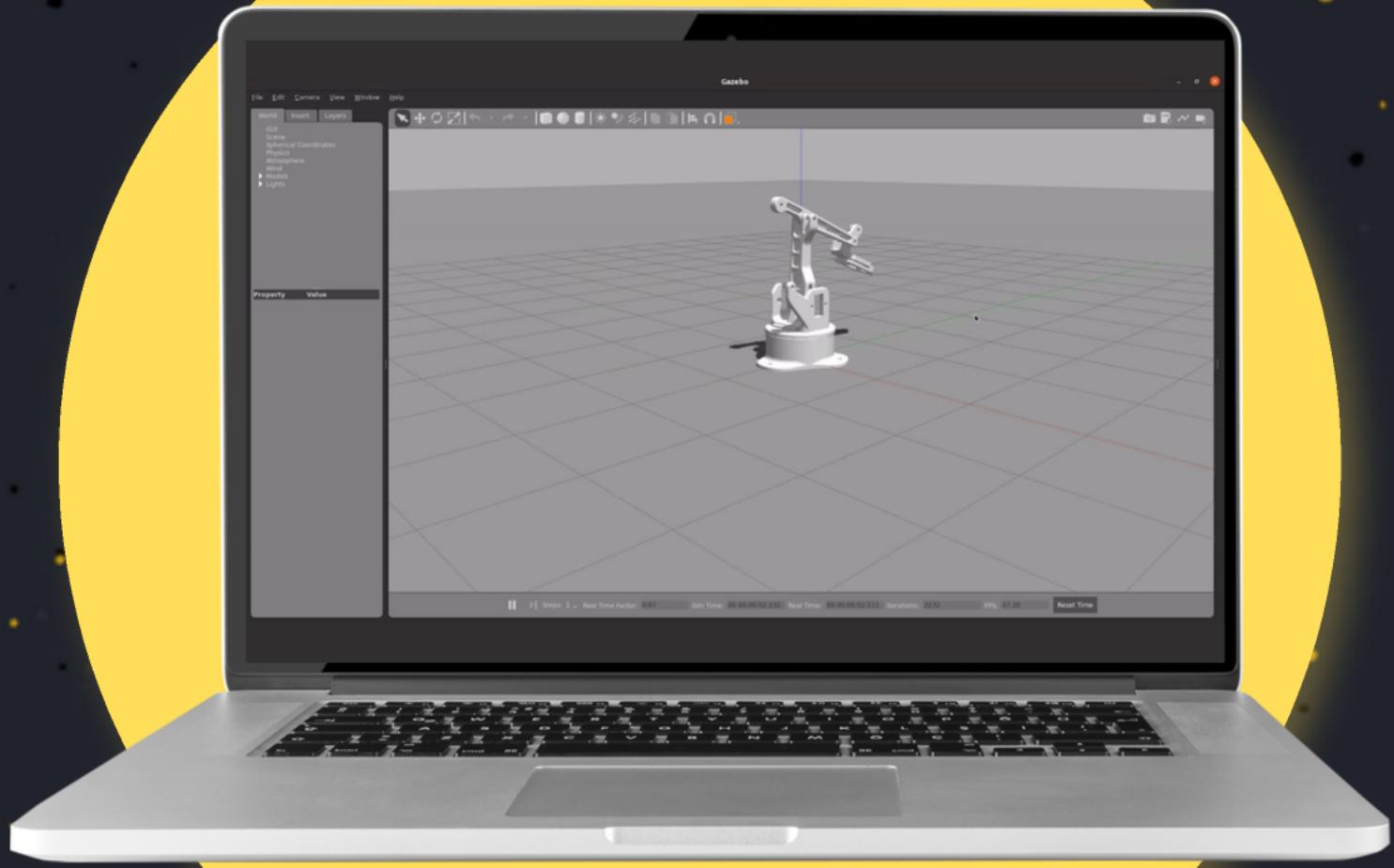
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Digital Twin



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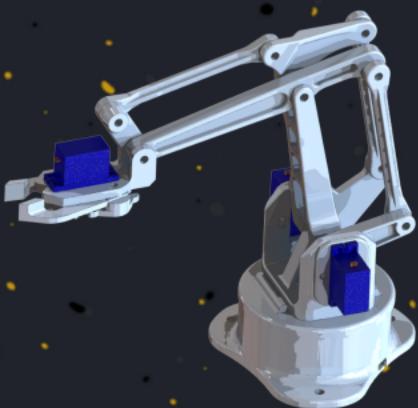
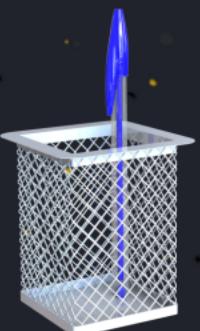
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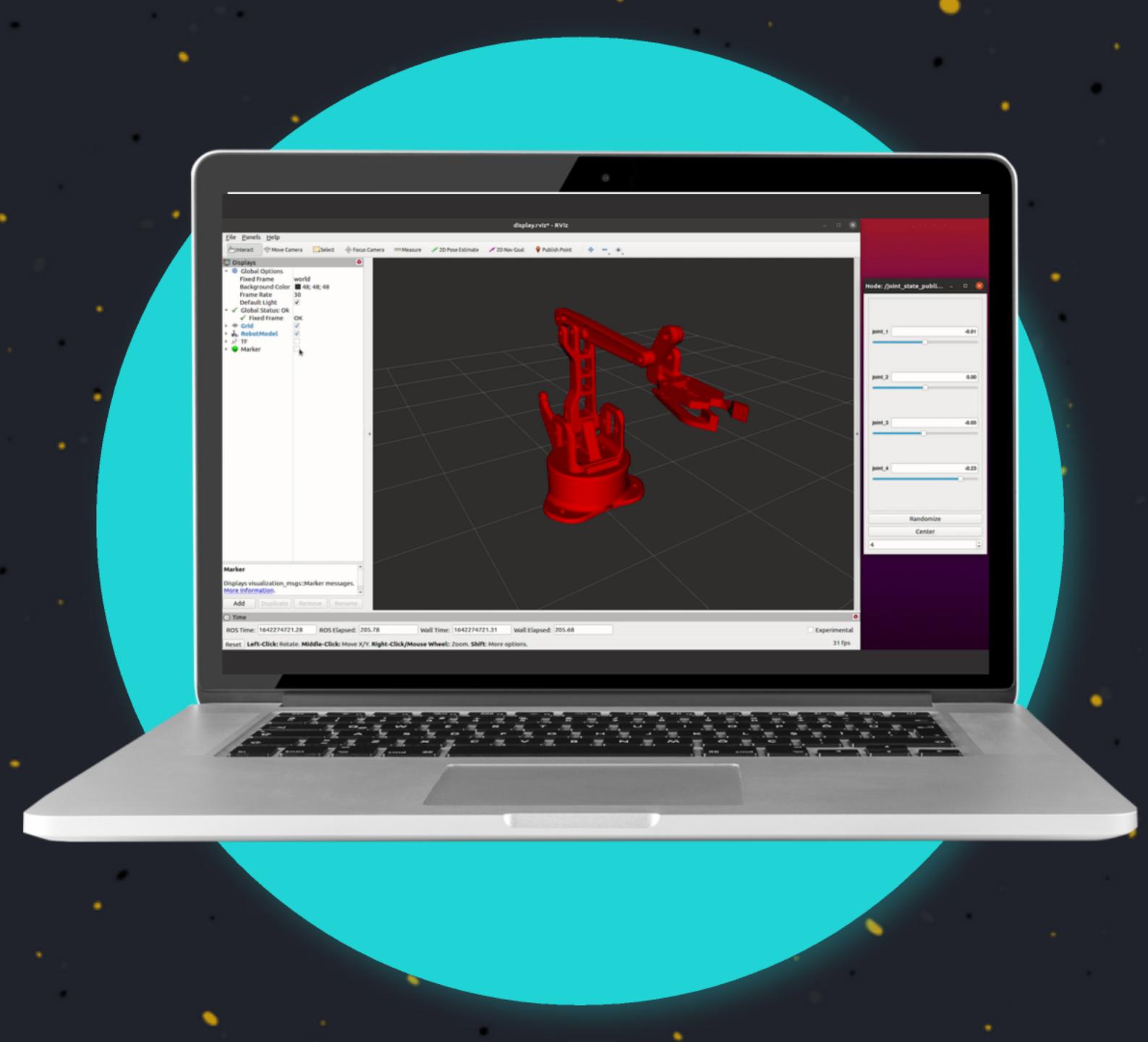
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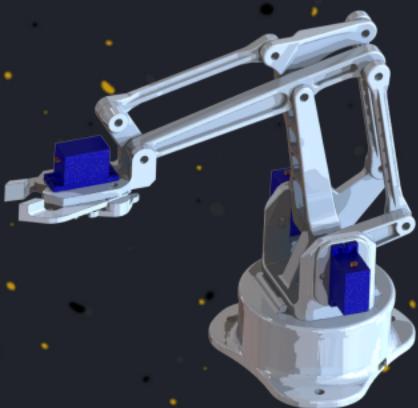
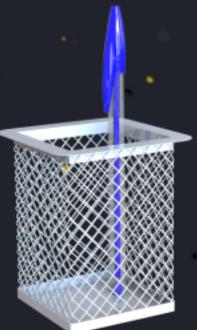
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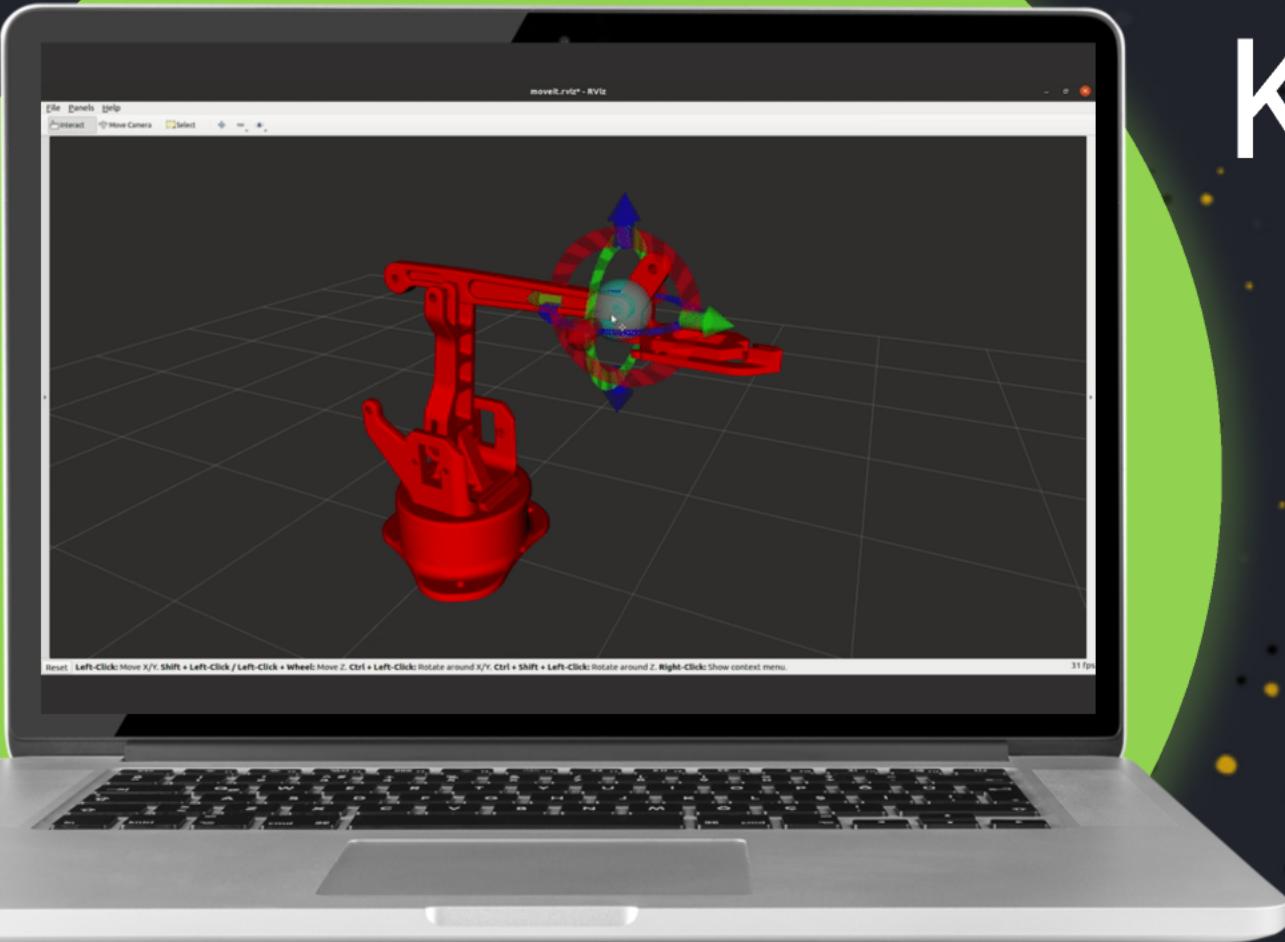
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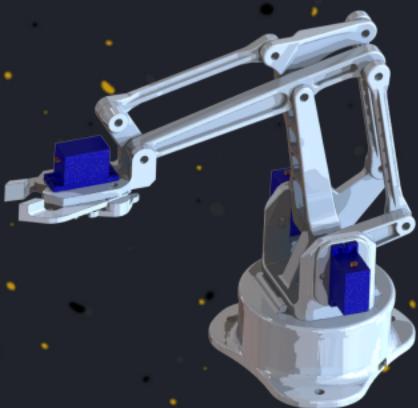
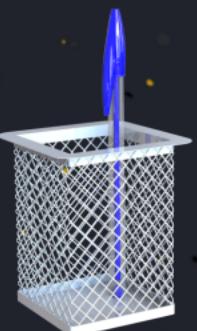
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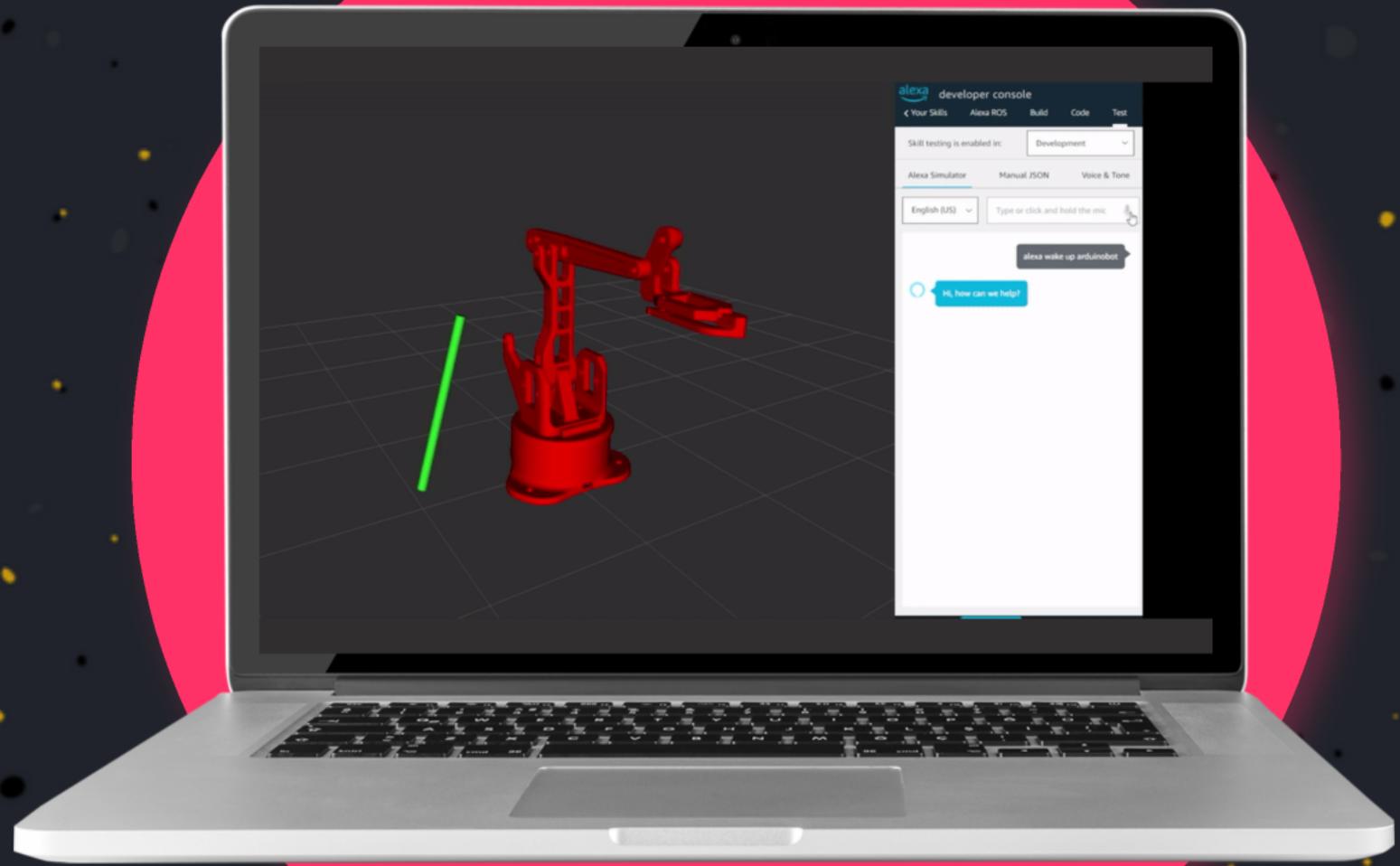
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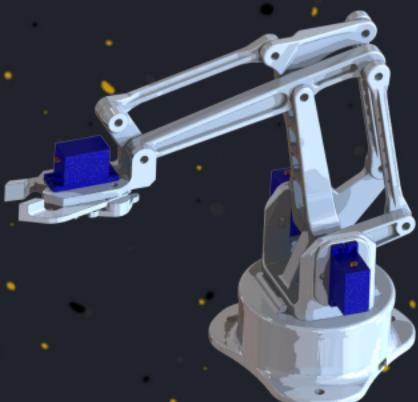
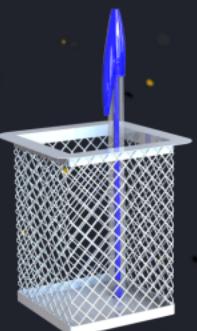
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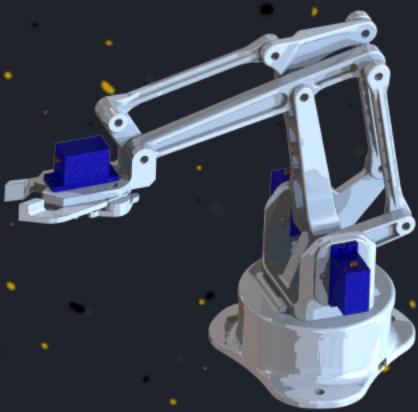
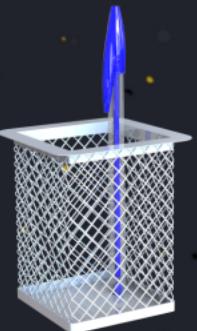
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Antonio Brandi

Team Leader - Autonomous Navigation Engineer

Self-Driving and ROS 2 - Learn by Doing!
Odometry & Control



Self-Driving and ROS 2 - Learn by Doing!
Map & Localization



Robotics and ROS - Learn by Doing!
Manipulators



Self Driving and ROS - Learn by Doing!
Odometry & Control



Antonio Brandi

Team Leader - Autonomous Navigation Engineer

Self-Driving and ROS 2 - Learn by Doing!
Odometry & Control

A thumbnail for a Udemy course. It features a red vertical bar on the left, a white central area with a portrait of Antonio Brandi, and a blue vertical bar on the right. In the center, there is a small icon of a hot air balloon next to the text "ROS 2". Below the portrait is a 3D rendering of a small robot or vehicle.

Self-Driving and ROS 2 - Learn by Doing!
Map & Localization

A thumbnail for a Udemy course. It features a red vertical bar on the left, a white central area with a portrait of Antonio Brandi, and a blue vertical bar on the right. In the center, there is a small icon of a hot air balloon next to the text "ROS 2". Below the portrait is a 3D rendering of a more complex robotic vehicle.

Robotics and ROS - Learn by Doing!
Manipulators

A thumbnail for a Udemy course. It features a white background with a black border. In the center, there is a portrait of Antonio Brandi, followed by the text "alexa" and "ROS" with their respective icons. Below the text is a 3D rendering of a robotic arm holding a pen.

Self Driving and ROS - Learn by Doing!
Odometry & Control

A thumbnail for a Udemy course. It features a white background with a black border. In the center, there is a portrait of Antonio Brandi, followed by the text "ROS" with its icon. Below the text is a 3D rendering of the same small robot or vehicle as the other thumbnails.



Antonio Brandi

Team Leader - Autonomous Navigation Engineer



Antonio Brandi

Team Leader - Autonomous Navigation Engineer



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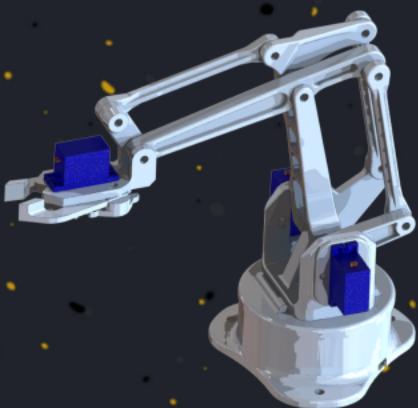
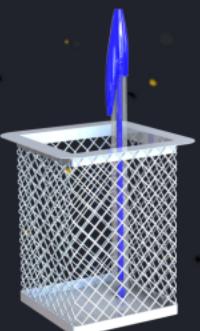
Kinematics

Application

Alexa

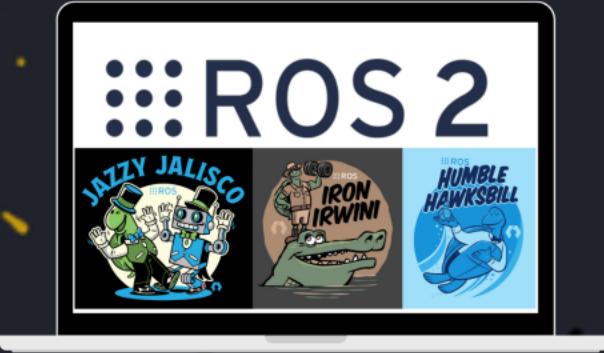
Conclusions

Build

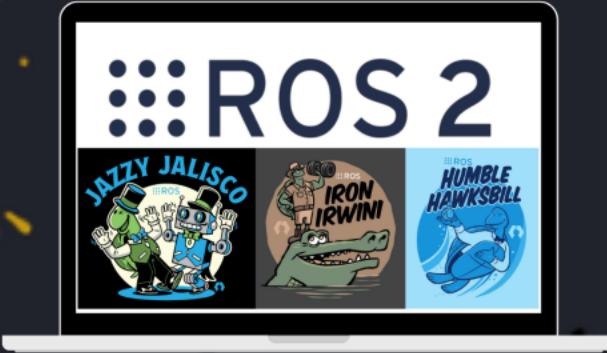




- Setup the environment carefully



- Setup the environment carefully



- Setup the environment carefully



- Setup the environment carefully
- Focus on Concepts not Code



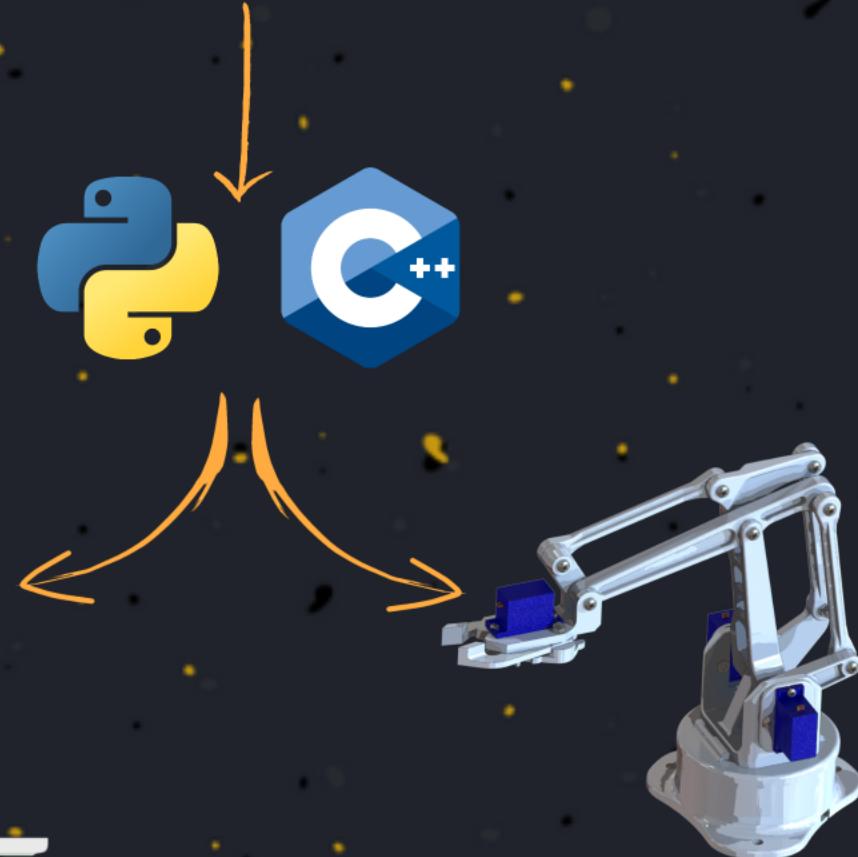
- Setup the environment carefully
- Focus on Concepts not Code



- Setup the environment carefully
- Focus on Concepts not Code



- Setup the environment carefully
- Focus on Concepts not Code
- Take your time to experiment



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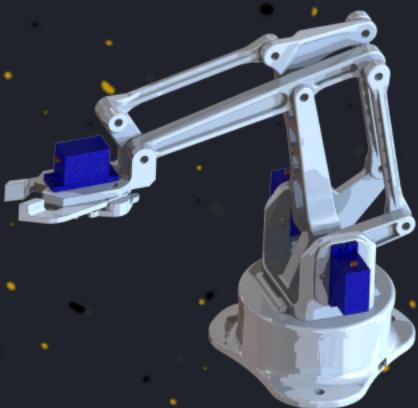
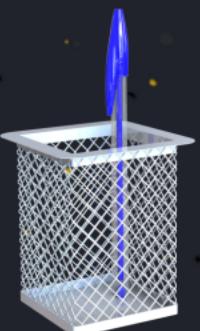
Kinematics

Application

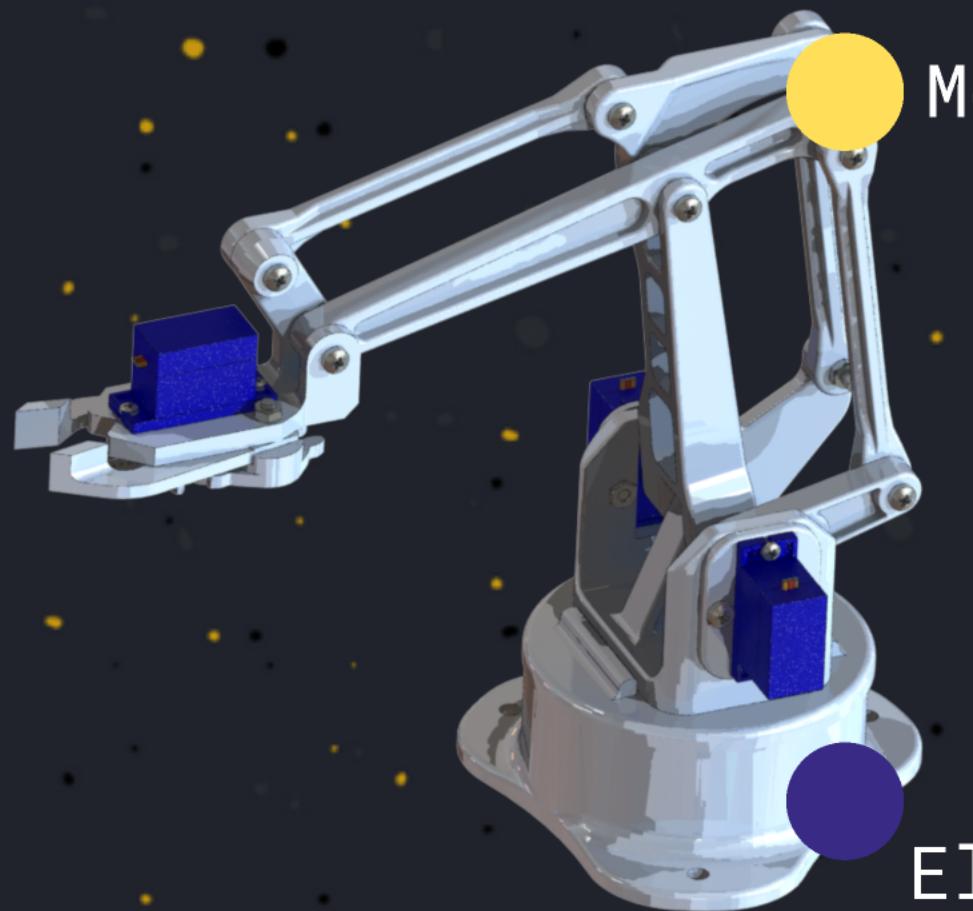
Alexa

Conclusions

Build

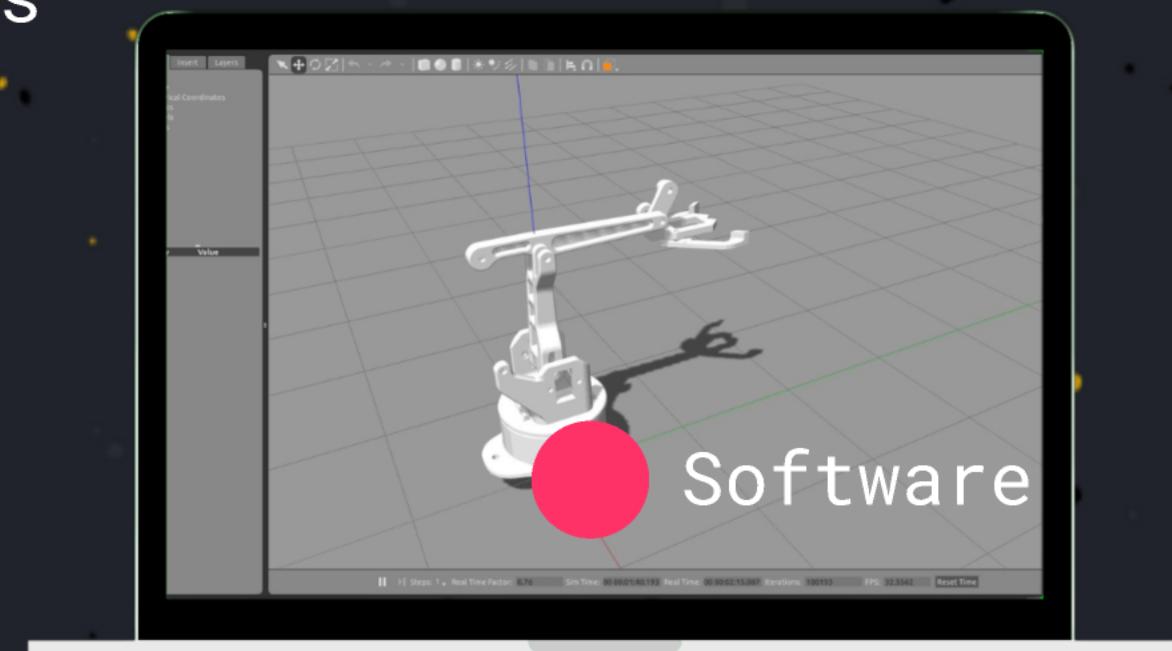


Build the Robot

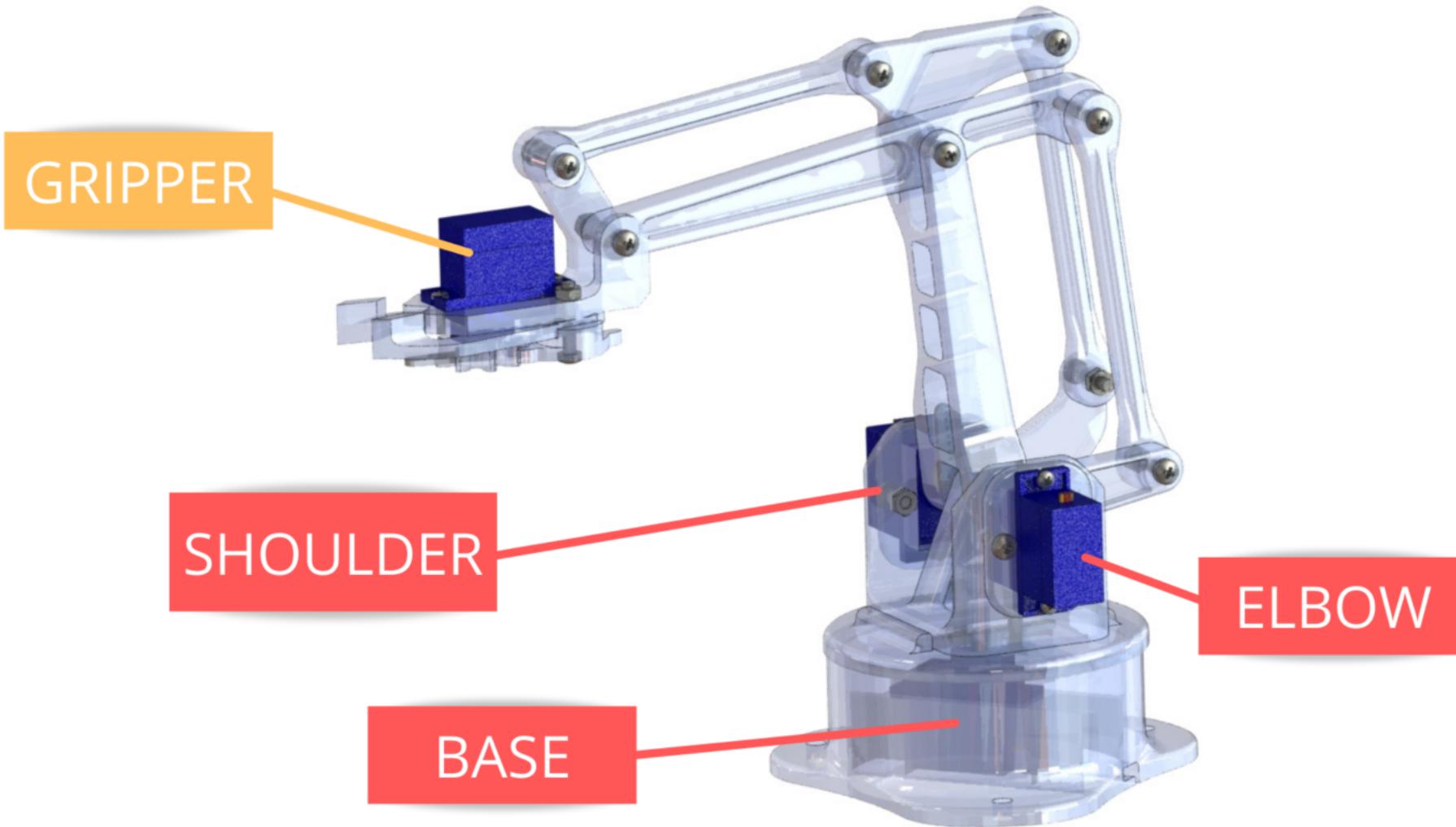


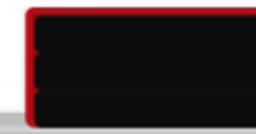
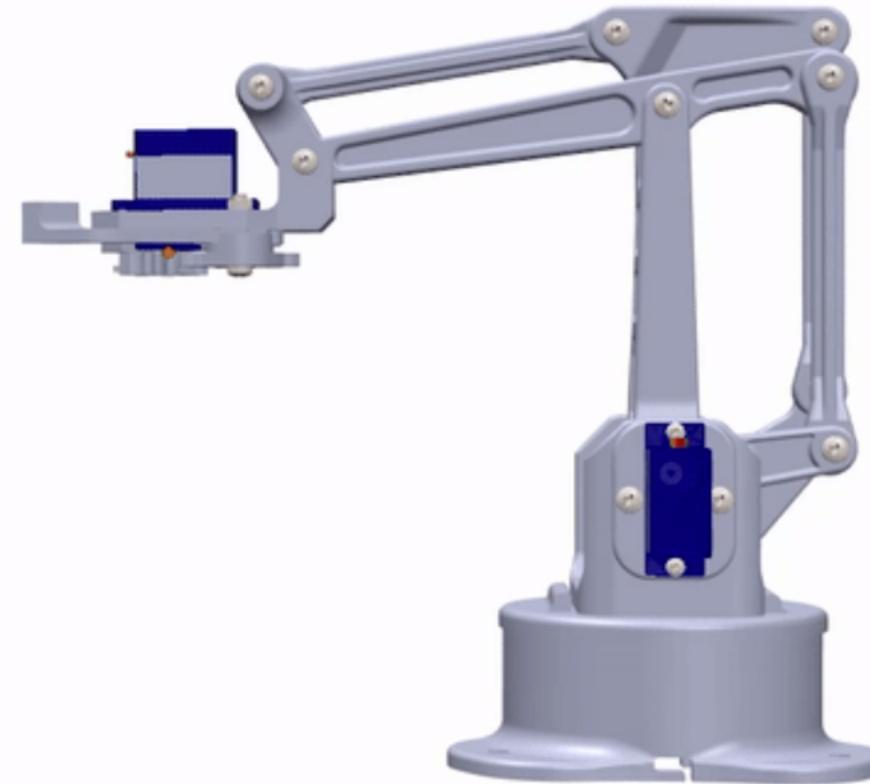
Mechanics

Simulate the Robot

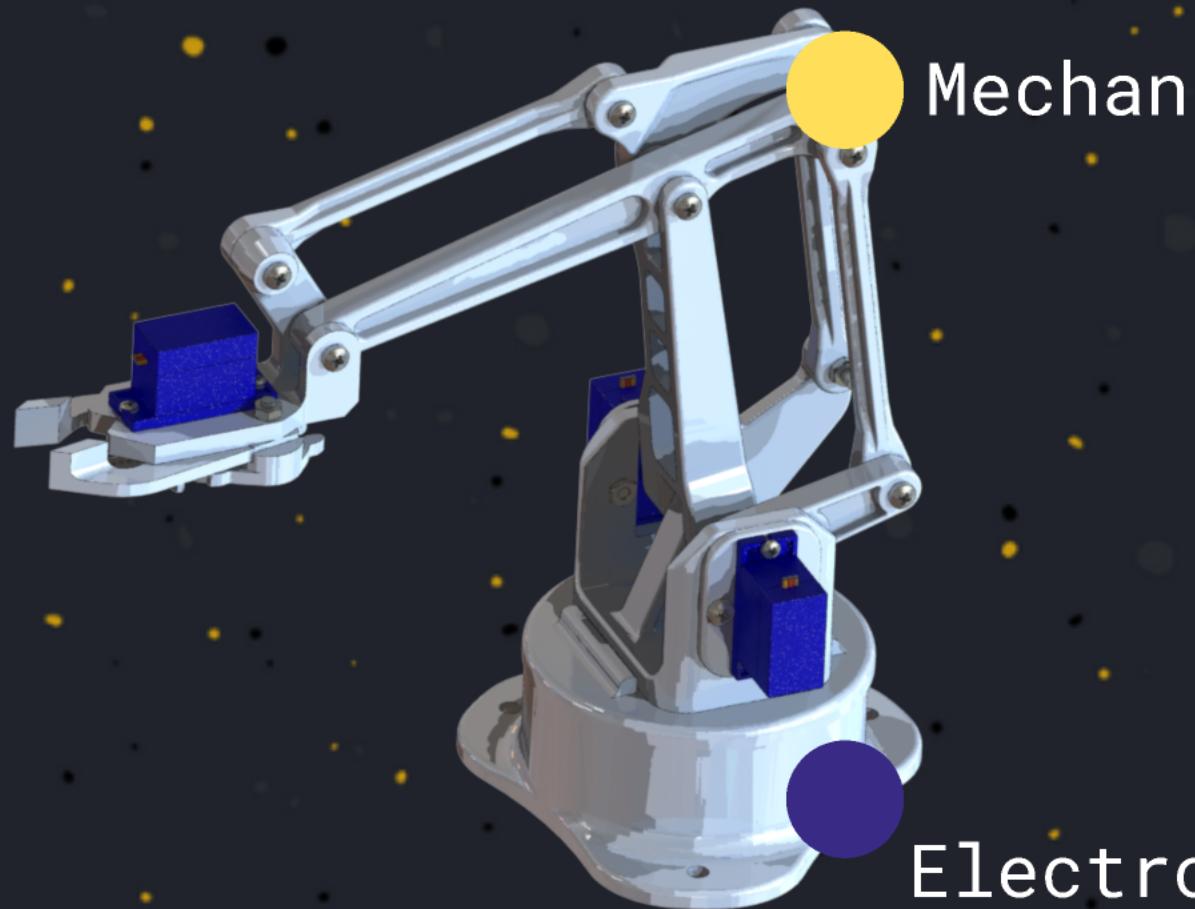


Electronics

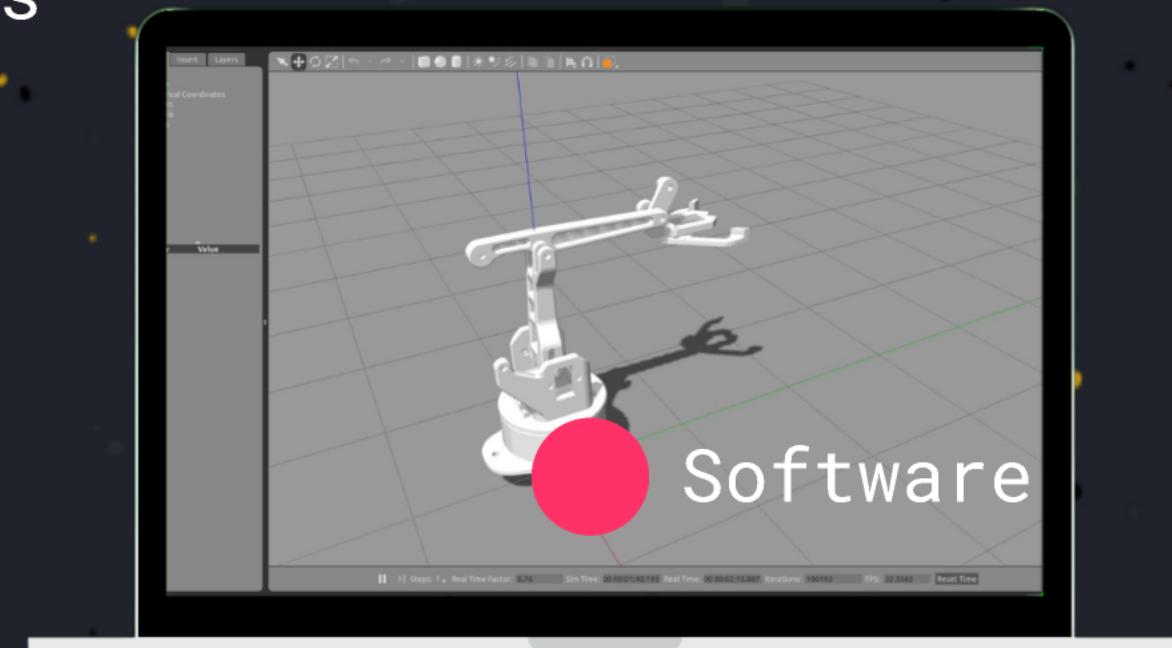




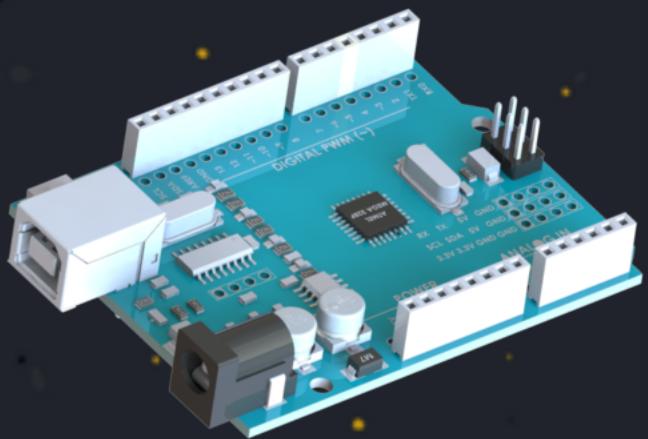
Build the Robot



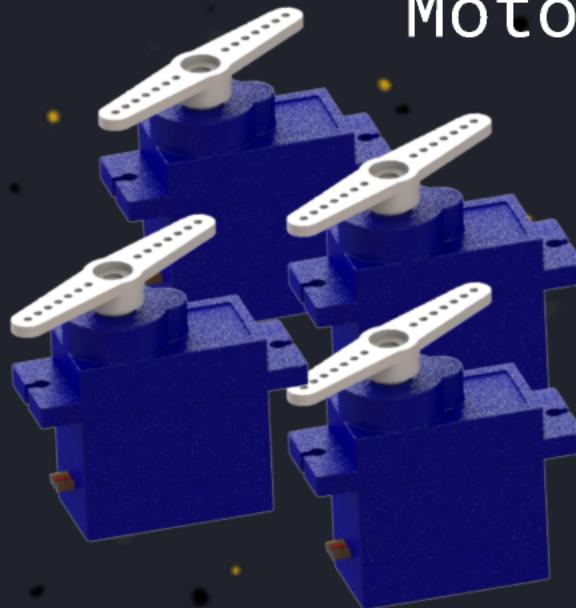
Simulate the Robot



Electronics



Arduino
UNO

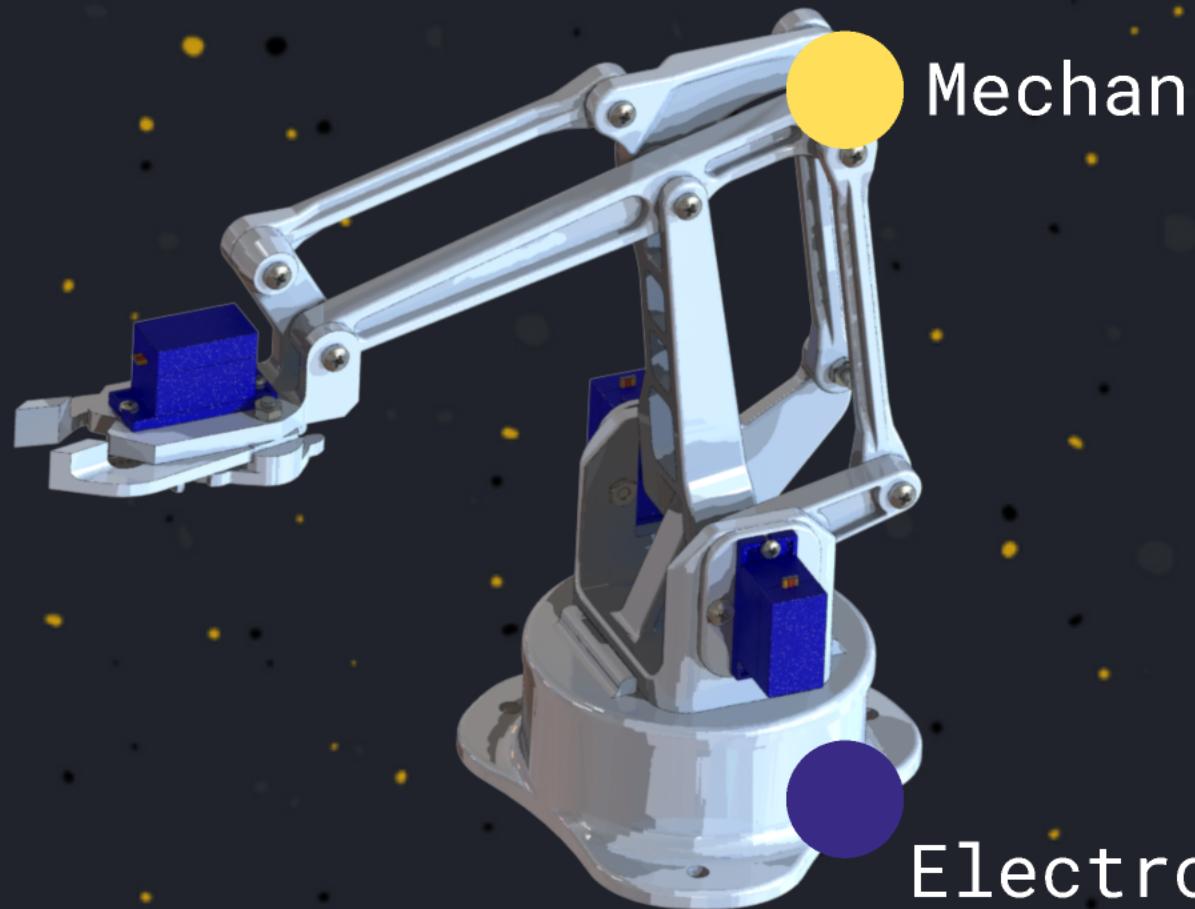


Servo
Motors



Jumper
Cables

Build the Robot



Simulate the Robot



Mechanics

Electronics

Software



Ubuntu
22.04

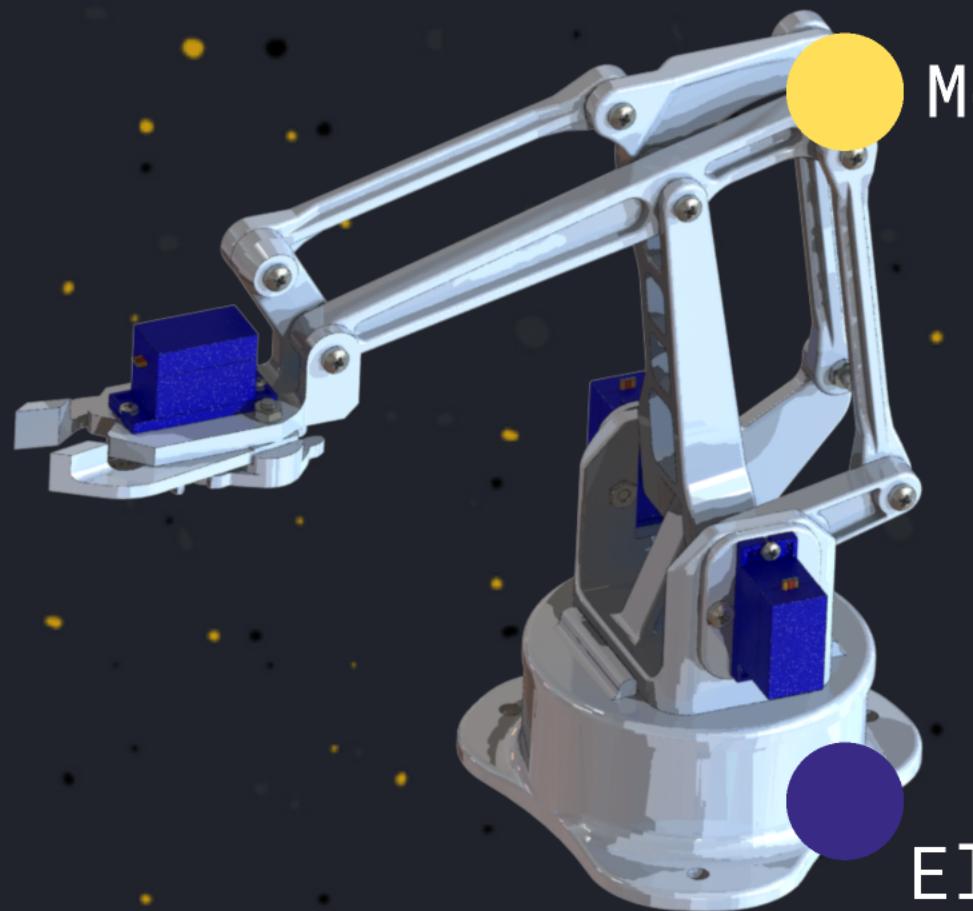
ROS 2

ROS 2
Humble/Iron

Arduino IDE



Build the Robot



Simulate the Robot



Mechanics

Electronics

Software

Arduinobot

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