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- Overview
- Courses
- Paths
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NEW COURSE

# Agibot X2 Quick Start

Master X2 like kung fu—through practice, exploration, and real-world control.


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- Discover
- In Progress
- Completed

Recently opened

23 hours ADVANCED




PLUS

### AgiBot A2 Quick Start

Learn how to operate, interact with, and deploy humanoid robot AgiBot A2.

Professional Certificate

23 hours ADVANCED




PLUS

### AgiBot A2 Nav & SLAM

Learn how A2 perceives, maps, and navigates its environment through practical exercises.

Professional Certificate

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Learn how to control, program, and interact with Omnihand.

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**Courses**

Courses → AgiBot A2 Quick Start

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# AgiBot A2 Quick Start

Learn how to operate, interact with, and deploy the humanoid robot AgiBot A2.

★★★★★ 5 (5)

Open Course



58%

NEW

- Advanced Robot Programming with AI
- 24 hours
- count exercises
- 1 robots used

Pre-requisites:

- ROS2 Humble

Robot(s) Used

- AgiBot A2

Course Creators

- Ricardo Tellez
- Miguel Angel Rodriguez
- Rodrigo Gonzalez

**Course Overview**


Get started with your humanoid robot AgiBot A2 in this hands-on quick start course. Learn the essential setup, basic operation, and safety procedures to confidently bring A2 to life and explore its core functionalities. Perfect for beginners and first-time users, this course helps you gain practical experience from the very first interaction.

**What You Will Learn**

- How to safely unbox and set up your humanoid robot AgiBot A2
- Powering on and initializing A2 for the first time
- Basic movement and control commands
- Understanding A2's key components and sensors
- Performing simple tasks and demonstrations
- Best practices for maintenance and troubleshooting

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**AgiBot X2 Quick Start**  
(11%)



## AgiBot X2 Quick Start

### 3.5 Nav2 Docker Setup for X2 Navigation

- Summary -

Estimated time to completion: 45 min


**Objective:**  
Learn how to deploy and configure Nav2 navigation stack for the AgiBot X2 using a containerized Docker approach, including costmap configuration, planner setup, and controller tuning.

See below an index to the topics covered in this unit:

- 3.5.1 Overview of the Nav2 Docker Architecture
- 3.5.2 Docker Compose Configuration
- 3.5.3 Nav2 Components and Configuration Files
- 3.5.4 Costmap Configuration for X2
- 3.5.5 Controller and Planner Setup
- 3.5.6 Launching and Testing Navigation

Code Editor

```
COLCON_IGNORE
ros2_ws > build > COLCON_IGNORE
1
```




Terminals

```
#1 <PID 510> user:~$ ros2 topic list
/clock
/cmd_vel
/livox/imu
/livox/lidar
/parameter_events
/rosout
user:~$
```

**AgiBot X2 快速入门指南**  
(11%)



## AgiBot X2 快速入门指南

### 3.5 X2 导航系统的 Nav2 Docker 环境搭建

- Summary -

预计完成时间: 45 分钟

**学习目标:**  
通过基于 Docker 容器的方式, 学习如何为 智元 X2 机器人部署与配置 Nav2 导航系统。内容涵盖代价地图 (Costmap) 配置、路径规划器 (Planner) 设置以及控制器 (Controller) 参数调优等关键环节。

本单元涵盖的主要内容如下:

- 3.5.1 Nav2 Docker 架构概述
- 3.5.2 Docker Compose 配置说明
- 3.5.3 Nav2 组件及其配置文件解析
- 3.5.4 面向 X2 机器人的代价地图配置
- 3.5.5 控制器与路径规划器的配置与设置
- 3.5.6 导航系统的启动与测试


代码编辑器

File Edit Selection View Go Help

COLCON\_IGNORE x

ros2\_ws > build > COLCON\_IGNORE

```
1
```



Manage

Ln 1, Col 1 LF UTF-8 Spaces: 4 Plain Text

仿真机器人



购买机器人

终端

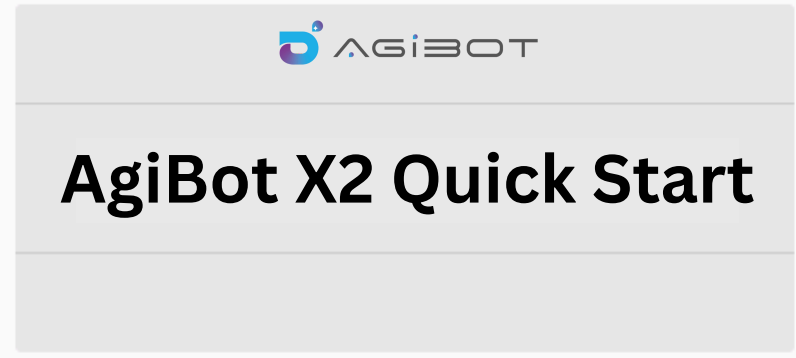
```
#1 <PID 510> #2 <PID 513> #3 <PID 516> #4 <PID 519> #5 <PID 702>
user:~$ ros2 topic list
/clock
/cmd_vel
/livox/imu
/livox/lidar
/parameter_events
/rosout
user:~$
```

English  
Español  
Français  
中文  
日本語  
한국어

Notebook

### AgiBot X2 Quick Start

(11%)



## 3.5 Nav2 Docker Setup for X2 Navigation

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- 3.5.5 Controller and Planner Setup
- 3.5.6 Launching and Testing Navigation



Buy this robot

Code Editor

File Edit Selection View Go Help

COLCON\_IGNORE

ros2\_ws > build > COLCON\_IGNORE

1

CO...

install

log

src

The Construct

Manage

Terminals

#1 <PID 510> #2 <PID 513>

```

user:~$ ros2 topic list
/clock
/cmd_vel
/livox/imu
/livox/lidar
/parameter_events
/rosout
user:~$
  
```

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## Trainings

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Intensive training to learn how A2 perceives, maps, and navigates.

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London, UK

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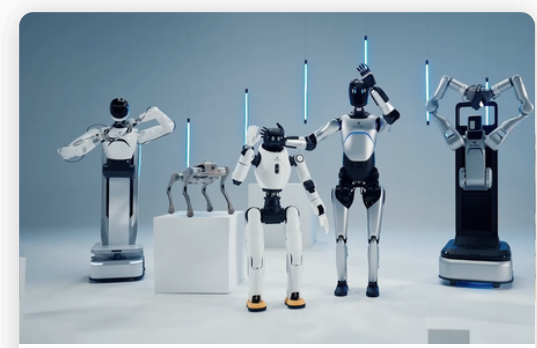
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Mastering Robot Fleet

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TRAINING**  
AgiBot A2  
Humanoid  
Robot  
Certificate  
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## Certificate of Participation



This certifies that

# Martin Ma

has successfully participated in the  
**AgiBot A2 Humanoid Robot  
Certificate Training**

The Construct  
The Construct S.m.S.L.  
Al Baraka St. P.O. Box 18011 Jeddah, Saudi  
www.theconstruct.ae | +966114011111

Issued by: The Construct  
Issued on: Nov. 7, 2025.

**RICARDO TÉLLEZ**  
CEO of The Construct

Verify at <https://app.theconstruct.ae/verify/RIA3A40AF4A1A70/>.  
The Construct has confirmed the participation of this individual in the event.

