

Flatland ROS 2 tutorials Evaluation

* Indicates required question

1. What is your current education level? (Highest degree you have already obtained) *

Mark only one oval.

- ☐ Grade 9
☐ Grade 10
☐ Grade 11
☐ Grade 12
☐ Bachelor's degree
☐ Master's degree
☐ PhD

Prior and gained knowledge

2. Before completing the tutorials, how much experience did you have in the following areas: *

Mark only one oval per row.

	1 - No experience	2	3	4	5	6	7 - A lot of experience
Robotics	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ROS 1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ROS 2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Robotic Simulators	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Flatland Simulator	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reinforcement Learning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

3. After completing the tutorials, how much do you think you have learned in the following areas: *

Mark only one oval per row.

	1 - Nothing learned	2	3	4	5	6	7 - A lot learned
Robotics	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ROS 1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ROS 2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Robotic Simulators	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Flatland Simulator	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reinforcement Learning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Virtual Machine

4. Did you use the VM to follow the tutorials? *

Mark only one oval.

- ☐ Yes Skip to question 6
- ☐ No Skip to question 5

Setup and Pre-requisites

5. How difficult was to install and setup the pre-requisites? *

Mark only one oval per row.

	1 - Very Easy	2	3	4	5	6	7 - Very Hard
Install ROS 2 Humble	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Setup Workspace	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Install Flatland 2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stable- Baselines3	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Flatland Teleopkeys Tutorial using ROS 2

https://github.com/FilipeAlmeidaFEUP/ros2_flatland_rl_tutorial

6. Were you able to run the package and see the robot move on its own? *

Mark only one oval.

☐ Yes

☐ No

7. Were you able to run the second node to read keystrokes and control the robot with the keyboard? *

Mark only one oval.

☐ Yes

☐ No

8. How useful did you find this tutorial to fulfill the following goals? *

Mark only one oval per row.

	1 - Not helpful at all	2	3	4	5	6	7 - Extremely helpful
Prepare a machine to develop basic ROS 2 packages with Flatland.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Analyse the progress of a virtual robot in 2D simulation with visualization tools.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Analyse the code controlling a virtual robot in 2D simulation.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Modify the code controlling a virtual robot in 2D simulation.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

9. How easy do you think these subjects are to understand? *

Mark only one oval per row.

	1 - Very simple	2	3	4	5	6	7 - Very complicated
ROS 2 Node structure	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ROS Topics and Services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ROS 2 launch file	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Flatland worlds	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Flatland layers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Flatland models and plugins	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

10. How well do you think these subjects were explained in the tutorials? *

Mark only one oval per row.

	1 - Not explained	2	3	4	5	6	7 - Very well explained
ROS 2 Node structure	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ROS Topics and Services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ROS 2 launch file	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Flatland worlds	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Flatland layers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Flatland models and plugins	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

11. Do you have any suggestions to improve the tutorial or problems you ran into while doing it?

Flatland Reinforcement Learning Tutorial using ROS 2

https://github.com/FilipeAlmeidaFEUP/ros2_teleopkeys_tutorial

12. Were you able to run the package? *

Mark only one oval.

☐ Yes

☐ No

13. Were you able to train the robot to complete the task? *

Mark only one oval.

☐ Yes

☐ No

14. How useful did you find this tutorial to fulfill the following goals? *

Mark only one oval per row.

	1 - Not helpful at all	2	3	4	5	6	7 - Extremely helpful
Prepare a machine to run a reinforcement learning system.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Analyse the behavior of a reinforcement learning agent.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Modify the learning parameters of a reinforcement learning agent.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

15. How easy do you think these subjects are to understand? *

Mark only one oval per row.

	1 - Very simple	2	3	4	5	6	7 - Very complicated
RL Agent	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
RL Environment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
State and Action spaces	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Steps and Episodes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

16. How well do you think these subjects were explained in the tutorials? *

Mark only one oval per row.

	1 - Not explained	2	3	4	5	6	7 - Very well explained
RL Agent	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
RL Environment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
State and Action spaces	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Steps and Episodes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

17. Do you have any suggestions to improve the tutorial or problems you ran into while doing it?

Managing Layers in Flatland slideshow

https://docs.google.com/presentation/d/1KqJDQR_PBaGtS-kA5KgsTbaRThu_uP2U8NJeoSP0GDE/edit?usp=sharing

18. Did you read the slideshow? *

Mark only one oval.

☐ Yes

☐ No *Skip to question 21*

Managing Layers in Flatland slideshow

https://docs.google.com/presentation/d/1KqJDQR_PBaGtS-kA5KgsTbaRThu_uP2U8NJeoSP0GDE/edit?usp=sharing

19. How simple was it to understand the method to determine the layers? *

Mark only one oval.

Very simple

1

☐

2

☐

3

☐

4

☐

5

☐

6

☐

7

☐

Very hard

20. Do you have any suggestions to improve the slideshow?

ROS 1 and ROS 2 comparison

21. Do you have any prior experience using ROS 1? *

Mark only one oval.

☐ Yes

☐ No

ROS 1 and ROS 2 comparison

22. What are the main differences you encountered between using ROS 1 and ROS 2? Do you think any of them is better or easier to use?

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