



PROFESSIONAL ROBOTICS WITH ROS 2 FOR ADULTS

1. Linux Course (9 hours)
2. Python for Robotics Course (11 hours)
3. ROS 2 Basics Course (Python) (20 hours)
4. ROS 2 BotBox Project 1
5. OpenCV Course (18 hours)
6. ROS 2 Perception (48 hours)
7. Line Following BotBox Project 2
8. URDF for Robot Modelling in ROS 2 Course (27 hours)
9. TF ROS Course (18 hours)
10. Gazebo Sim with ROS 2 Course (18 hours)
11. ROS 2 Navigation Course (20 hours)
12. Nav2 BotBox Project 3
13. Intermediate ROS 2 (12 hours)
14. Arm Kinematics Course (18 hours)
15. ROS 2 Manipulation Course (12 hours)
16. Grasping BotBox Project 4
17. Advanced ROS 2 Navigation Course (12 hours)
18. Behaviour Trees (20 hours)
19. Artificial Intelligence:
 1. ROS Autonomous Vehicles (8 hours)
 2. NVIDIA Jetson Nano with ROS (25 hours)
 3. OpenAI with ROS (15 hours)
 4. Deep Learning with Domain Randomisation (15 hours)
 5. Reinforcement Learning for Robotics (16 hours)
20. ROS 2 Security (8 hours)
21. Programming drones in ROS (5 hours)
22. FlexBe (10 hours)
23. Distributing ROS apps with Snaps (12 hours)
24. ROS2 Control Framework (20 hours)
25. Robotics Theory:
 1. Robot Control Basics (18 hours)
 2. Robot Dynamics and Control (12 hours)
 3. Basic Kinematics of Mobile Robots (18 hours)
 4. Kalman Filters (10 hours)
 5. Basic Maths for Robotics (12 hours)
 6. Path Planning Basics (12 hours)
 7. Basic Arm Kinematics (10 hours)
 8. Kalman Filters in ROS2 (10 hours)
26. Sensor Fusion for Navigation (12 hours)
27. RTAB-Map in ROS (1 hour)
28. TEB Local Planner (7 hours)
29. ROS Debugging Tools:
 1. Unit Testing with ROS (8 hours)
 2. RViz Advanced Markers (8 hours)
 3. Debug Cases (8 hours)
30. Developing Web Interfaces for ROS2 (20 hours)
31. Simulations:
 1. MuJoCo Simulator Basics for Robotics (15 hours)
 2. Building Gazebo Simulations with Blender (24 hours)
 3. Mastering Gazebo Classic (20 hours)