

Command ROS

1. Getting Started with ROS Programming

```
roslaunch mastering_ros_demo_pkg demo_topic_publisher
roslaunch mastering_ros_demo_pkg demo_topic_subscriber
roslaunch mastering_ros_demo_pkg demo_msg_publisher
roslaunch mastering_ros_demo_pkg demo_msg_subscriber
roslaunch mastering_ros_demo_pkg demo_service_server
roslaunch mastering_ros_demo_pkg demo_service_client
```

2. Working with ROS for 3D Modeling

```
roslaunch mastering_ros_robot_description_pkg view_demo.launch
roslaunch mastering_ros_robot_description_pkg view_arm.launch
roslaunch mastering_ros_robot_description_pkg view_mobile_robot.launch
```

3. Simulating Robots Using ROS and Gazebo

```
roslaunch seven_dof_arm_gazebo seven_dof_arm_gazebo_control.launch
rostopic pub /seven_dof_arm/joint4_position_controller/command std_msgs/Float64
"data: 1.0"
roslaunch diff_wheeled_robot_control keyboard_teleop.launch
rviz
```

4. Exploring the Advanced Capabilities of ROS MoveIt!

```
roslaunch seven_dof_arm_config demo.launch
roslaunch seven_dof_arm_test test_random_node
roslaunch seven_dof_arm_test add_collision_object
roslaunch seven_dof_arm_test pick_place
```