Title of the course	Training on ROS Robotic Operating System
Certification	Certificate of Participation
Hourly volume	18 H
Materials needed	Laptop
Acquired skills	ROS Development / Linux / Python
Summary	The Robot Operating System (ROS) is a set of software libraries and tools that help you build robot applications. From drivers to state-of-the-art algorithms, and with powerful developer tools, ROS has what you need for your next robotics project. And it's all open-source. ROS also offers a standard software platform to developers across industries that will carry them from research and prototyping all the way through to deployment and production.

Khaled Khnissi is a Dr. Engineer in robotics and AI at National Superior School of Engineers of Tunis ENSIT. He has obtained his mechatronics engineering degree from National engineering School of Carthage ENICAR in 2015 and PhD from National Superior School of Engineers of Tunis ENSIT. He is a member of RIFTSI research laboratory. His main study focuses on robotic controls and machine learning. He is an assistant professor at Dakar American University of Science and Technology (**DAUST**) and Virtual University of Tunis (**UVT**).

Khaled's current field is autonomous navigation of mobile robot SLAM using artificial intelligence. Also, he is working on real-time Traffic Sign Recognition (**TSR**) using deep learning. Khaled is also a chief engineer at STB BANK in Tunisia.

ROS Training Program: Robotic Operating System

Each session will last 3 hours:

Session 1: Work Environment Preparation

> ➤ Virtual machine installation with ROS.

Session 2: Introduction to ROS

> ➤ ROS introductory course and general framework.

Session 3: Introduction to Linux

> ➤ Basic Linux commands.

Session 4: Robotic Control under ROS

> ➤ Learn to program in ROS with Python.

Session 5: Advanced Development

> ➤ Develop your own program.

Session 6: Simulation and Implementation

> ➤ Simulation and Implementation using Gazebo and Turtlebot.