

Workshop Objectives

- ❖ This one-week workshop on " Robot Operating System on ROS" is designed to provide learners with a comprehensive understanding of the fundamental concepts of Robot Operating System.
- ❖ The workshop will focus on ROS (Robot Operating System) for robotics programming and implementing the same in the simulation environment called Gazebo.
- ❖ Learners will also be trained to Implement algorithms for robot navigation.

Workshop Outcomes

After completion of this workshop, participants will be able to:

- ❖ Understand the Overview of the Robot Operating System
- ❖ Basic Linux commands for ROS
- ❖ Navigating ROS files, Create and build ROS package, System framework
- ❖ Overview of a ROS based robot, Understanding unified Robot Description Format of a robot, RViz basics
- ❖ Gazebo basics, Exploring gazebo user interface, Writing launch files, Intro to gazebo plugins
- ❖ ROS robot simulation, Simulating robots using ROS and Gazebo, ROS navigation stack, SLAM and Go-to-goal of DDWMMR

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Department of Electrical and Electronics Engineering



Scheme for Promotion of Academic and Research Collaboration

One Week Workshop on Robot Operating System (ROS)

12th – 17th August 2024

(Offline Mode)



Chaitanya Bharathi Institute of Technology

(Autonomous under UGC)
Affiliated to Osmania University
Kokapet (Village), Gandipet,
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Chaitanya Bharathi Institute of Technology (CBIT)

CBIT is one of the premier Engineering Institutes in India, a pioneer in Telangana State, which is at the idyllic surroundings of Gandipet Lake, Hyderabad. The college offers 12 UG and 10 PG programs. It has been standing as a temple of knowledge for the past 45 years by producing more than 25,000 Eminent and skillful Graduate Engineers, who are successful in their Careers, serving all over the world. CBIT Students are prepared and perfected to secure Placements in reputed MNCs. The Institute has been accredited by NAAC – UGC with 'A++' Grade and several programs are accredited by NBA – AICTE. The UGC has granted Autonomous Status from the Academic Year 2013-14 onwards. Stringent Academic Standards, Industry Compliant Teaching Methodology, Research Projects from Private and Public Sector organizations Industries in Engineering and Management and Consultancy Practice, enabled the Institute to establish its Identity in Technical Education and is ranked as one of the best amongst Private Engineering Colleges in both the Telugu Speaking States.

About Department

CBIT started the Electrical & Electronics Engineering UG program in 1994 and has been accredited 5 times since 2004 by NBA. The recent accreditation in 2021 is for 6 years. The intake was increased from 60 to 120 in the Academic Year 2013-14. The Department started offering a PG course in Power Systems and power Electronics in 2006 with an intake of 18 and was accredited by the NBA in the year 2016. The department has received grants worth around ₹90 lakhs from AICTE under RPS, SPARC, MODROBS, FDP, STTP, etc. The Department is offering consultancy services worth ₹21 lakhs in collaboration with Foreign Universities in Renewable Energy Systems. The Department is also certified by ISO 9001:2015. The Department is recognized as a Research Centre in 2017 by Osmania University to carry out research for the award of Ph.D. degrees.

About Workshop

The Robot Operating System (ROS) is an open-source, flexible framework for writing and operating robotic software. It provides a collection of tools, libraries, and conventions that aim to simplify the task of creating complex and robust robot behavior across a wide variety of robotic platforms. ROS facilitates modular design with its distributed architecture, allowing developers to write reusable and scalable code. Core components include nodes, topics, services, and actions, which enable seamless communication between different parts of a robotic system. With powerful tools for simulation, visualization, and data recording, ROS accelerates development, testing, and deployment of advanced robotic applications, making it a vital resource for both research and industry.

Workshop Registration Link

<https://forms.gle/yebwsPGkbF4gpDiKA>

Workshop Registration QR Code



Resource Persons

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Registration Fee

Faculty Member/ Industry : ₹500
Research Scholar / Student : ₹100

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