

Robotics System Toolbox™

Getting Started Guide



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Product Overview

Robotics System Toolbox Product Description

Design, simulate, test, and deploy robotics applications

Robotics System Toolbox provides tools and algorithms for designing, simulating, testing, and deploying manipulator and mobile robot applications. For manipulators, the toolbox includes algorithms for collision checking, path planning, trajectory generation, forward and inverse kinematics, and dynamics using a rigid body tree representation. For mobile robots, it includes algorithms for mapping, localization, path planning, path following, and motion control. The toolbox lets you build test scenarios and use the provided reference examples to validate common industrial robotic applications. It also includes a library of commercially available industrial robot models that you can import, visualize, simulate, and use with the reference applications.

You can develop a functional robot prototype by combining the kinematic and dynamic models provided. The toolbox lets you co-simulate your robot applications by connecting directly to the Gazebo robotics simulator. To verify your design on hardware, you can connect to robotics platforms such as Kinova Gen3 and Universal Robots UR series robots and generate and deploy code (with MATLAB® Coder™ or Simulink® Coder).