Learn about MATLAB and Simulink Capabilities

Automated Driving
mathworks.com/solutions/automotive/automated-driving
Design automated driving systems including driving scenario simulation, sensing, path planning, and sensor fusion and controls.

Model Predictive Control
mathworks.com/products/mpc
Design and simulate MPC controllers for developing automated driving applications such as adaptive cruise control, lane keeping assist, parallel parking and lane following control systems.

Reinforcement Learning
mathworks.com/products/reinforcement-learning
Design and train policies using reinforcement learning. Generate code from trained policies for deployment to embedded devices.

Resources for Learning and Teaching Control Systems

Low-Cost Hardware Support
mathworks.com/hardware-support
Download hardware packages for Arduino, Raspberry Pi, and LEGO.

MATLAB Tech Talks
mathworks.com/tech-talks
Watch tech talks to learn fundamentals of control systems, deep learning, systems engineering, reinforcement learning and many more engineering concepts.

Teaching Controls with MATLAB and Simulink
mathworks.com/academia/courseware
Explore controls teaching resources including a sampling of course curricula, virtual labs, educational videos, code examples and auto grading tools.

Instructor resources for teaching with MATLAB and Simulink:

- Learn through interactive examples with MATLAB and Simulink Onramps: matlabacademy.mathworks.com
- Classroom training in MATLAB or other MathWorks products: mathworks.com/training-schedule
- Online teaching with MATLAB and Simulink: mathworks.com/academia/online-teaching
- Hardware for Project-Based Learning: mathworks.com/academia/hardware
- Virtual Labs and Projects with MATLAB and Simulink: mathworks.com/academia/online-teaching/virtual-labs
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