







List of MATLAB Tool boxes

Product	Product
<ul style="list-style-type: none"> <li>• MATLAB</li> <li>• Simulink</li> <li>• Aerospace Blockset</li> <li>• Aerospace Toolbox</li> <li>• Antenna Toolbox</li> <li>• Audio System Toolbox</li> <li>• Automated Driving System Toolbox</li> <li>• Bioinformatics Toolbox</li> <li>• Communications System Toolbox</li> <li>• Computer Vision System Toolbox</li> <li>• Control System Toolbox</li> <li>• Curve Fitting Toolbox</li> <li>• DSP System Toolbox</li> <li>• Data Acquisition Toolbox</li> <li>• Database Toolbox</li> <li>• Datafeed Toolbox</li> <li>• Econometrics Toolbox</li> <li>• Embedded Coder</li> <li>• Filter Design HDL Coder</li> <li>• Financial Instruments Toolbox</li> <li>• Financial Toolbox</li> <li>• Fixed-Point Designer</li> <li>• Fuzzy Logic Toolbox</li> <li>• Global Optimization Toolbox</li> <li>• HDL Coder</li> <li>• HDL Verifier</li> <li>• Image Acquisition Toolbox</li> <li>• Image Processing Toolbox</li> <li>• Instrument Control Toolbox</li> <li>• LTE System Toolbox</li> <li>• MATLAB Coder</li> <li>• MATLAB Compiler</li> <li>• MATLAB Compiler SDK</li> <li>• MATLAB Report Generator</li> <li>• Mapping Toolbox</li> <li>• Model Predictive Control Toolbox</li> <li>• Model-Based Calibration Toolbox</li> <li>• Neural Network Toolbox</li> <li>• OPC Toolbox</li> <li>• Optimization Toolbox</li> <li>• Parallel Computing Toolbox</li> </ul>	<ul style="list-style-type: none"> <li>• Partial Differential Equation Toolbox</li> <li>• Phased Array System Toolbox</li> <li>• Polyspace Bug Finder</li> <li>• Polyspace Code Prover</li> <li>• Powertrain Blockset</li> <li>• RF Blockset</li> <li>• RF Toolbox</li> <li>• Risk Management Toolbox</li> <li>• Robotics System Toolbox</li> <li>• Robust Control Toolbox</li> <li>• Signal Processing Toolbox</li> <li>• SimBiology</li> <li>• SimEvents</li> <li>• Simscape</li> <li>• Simscape Driveline</li> <li>• Simscape Electronics</li> <li>• Simscape Fluids</li> <li>• Simscape Multibody</li> <li>• Simscape Power Systems</li> <li>• Simulink 3D Animation</li> <li>• Simulink Code Inspector</li> <li>• Simulink Coder</li> <li>• Simulink Control Design</li> <li>• Simulink Design Optimization</li> <li>• Simulink Design Verifier</li> <li>• Simulink Desktop Real-Time</li> <li>• Simulink PLC Coder</li> <li>• Simulink Real-Time</li> <li>• Simulink Report Generator</li> <li>• Simulink Test</li> <li>• Simulink Verification and Validation</li> <li>• Spreadsheet Link</li> <li>• Stateflow</li> <li>• Statistics and Machine Learning Toolbox</li> <li>• Symbolic Math Toolbox</li> <li>• System Identification Toolbox</li> <li>• Trading Toolbox</li> <li>• Vehicle Network Toolbox</li> <li>• Vision HDL Toolbox</li> <li>• WLAN System Toolbox</li> <li>• Wavelet Toolbox</li> </ul>

## **MATLAB Applications:**

 <b>Computational Biology</b> Compute biological data with analysis, visualization, and modeling	 <b>FPGA, ASIC, SoC Design</b> Work with FPGA, ASIC, and SoC designs modeling, implementation, and verification	 <b>Power Electronics Control Design</b> Provide digital control for motors, power converters, and battery systems by designing and implementation
 <b>Control Systems</b> Control systems design, testing, and implementation	 <b>Image Processing and Computer Vision</b> Algorithm development and systems design for image and video processing- <ul style="list-style-type: none"><li>• 3 D Image Processing</li><li>• Video Processing</li><li>• Embedded Vision</li></ul>	 <b>Predictive Maintenance</b> Development of condition monitoring and predictive maintenance software with deployment
 <b>Data Science</b> Improve designs and decisions by developing data-driven insights	 <b>Internet of Things</b> Get insight from the data by connecting your embedded devices to the internet	 <b>Robotics</b> Real world robotics solutions to build autonomous systems
 <b>Deep Learning</b> Designing, building, and visualization of neural networks	 <b>Embedded Systems</b> Design and build embedded systems by coding intuitively	 <b>Signal Processing</b> Simulate signal processing systems by modeling and designing of signals and time-series data
 <b>Machine Learning</b> Build predictive models by discovering new patterns	 <b>Test and Measurement</b> Explore data and automate tests	 <b>Mechatronics</b> Mechatronic systems design, development, and optimization
 <b>Wireless Communications</b> Wireless communications system designing and testing	 <b>Mixed-Signal Systems</b> Analog and mixed-signal systems designing and development	 <b>Enterprise and IT Systems</b> Deploy MATLAB code to enterprise IT Systems with security and maintainability

 <p><b>Communications</b> Development of industrial wireless communication systems</p>	 <p><b>Energy Production</b> Development of systems of energy production</p> <ul style="list-style-type: none"> <li>• Power and Utilities</li> <li>• Chemicals and Petrochemicals</li> <li>• Oil and Gas</li> </ul>	 <p><b>Software and Internet</b> Development of algorithms for software and internet systems</p>
 <p><b>Earth, Ocean, and Atmospheric Sciences</b> Working with complex geological systems</p>	 <p><b>Metals, Materials, and Mining</b> Working with sensor data to implement control strategies</p>	 <p><b>Electronics</b> Development of electronics systems and devices</p>
 <p><b>Biological Sciences</b> Modeling and simulation of biological systems</p>	 <p><b>Industrial Automation and Machinery</b> Development of signal processing applications for industrial and energy-related equipment</p>	 <p><b>Medical Devices</b> Development of algorithms for medical devices</p>
 <p><b>Biotech and Pharmaceutical</b> Data analysis for drug discovery, development, trials, and manufacturing</p>	 <p><b>Aerospace and Defense</b> Development of systems for aerospace and defenses</p>	 <p><b>Semiconductors</b> Design and development of semiconductors devices</p>
 <p><b>Quantitative Finance and Risk Management</b> Development of algorithms for quantitative finance and risk management</p>	 <p><b>Neuroscience</b> Development, modeling, and simulation of models of brain circuits</p>	 <p><b>Automotive</b> Development of industry-specific automotive systems with required standards</p> <ul style="list-style-type: none"> <li>• Automated driving systems</li> </ul>
 <p><b>Railway Systems</b> Development, modeling, simulation, and optimization of railway applications</p>		