



Course Completion Certificate

Shashwat Shukla

has successfully completed **100%** of the self-paced training course

Machine Learning Onramp



DIRECTOR, TRAINING SERVICES

8 October 2025



Machine Learning Onramp

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COMPLETED v1—English (change)

Learn the basics of practical machine learning for classification problems in MATLAB®. Use a machine learning model that extracts information from real-world data to group your data into predefined categories.

Course modules

[Overview of Machine Learning](#) 100% | 10 min

[Import Data](#) 100% | 10 min

[Extract Features](#) 100% | 15 min

[Partition Data for Validation](#) 100% | 10 min

[Train Models](#) 100% | 10 min

[Evaluate Performance](#) 100% | 10 min

[Improve Performance](#) 100% | 5 min

[Conclusion](#) 100% | 5 min



Machine Learning Onramp

COMPLETED

1 hour

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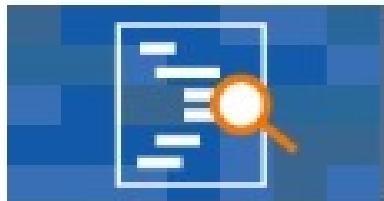
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MATLAB Coding Practices for Efficiency and Performance



DIRECTOR, TRAINING SERVICES

7 October 2025



MATLAB Coding Practices for Efficiency and Performance

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COMPLETED Access expires Apr 30, 2026 | v1—English

Take your MATLAB coding skills to the next level by learning to write efficient and performant code. Learn how to identify bottlenecks, increase efficiency through vectorization and preallocation, and examine memory usage.

Course modules

[Introduction](#) 100% | 5 min

[Measure Performance](#) 100% | 10 min

[Find Bottlenecks](#) 100% | 10 min

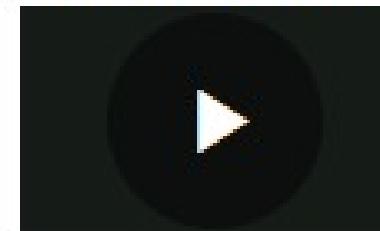
[Vectorization](#) 100% | 15 min

[Memory Usage](#) 100% | 0.5 hours

[Preallocation](#) 100% | 15 min

[Conclusion](#) 100% | 5 min

About this course



Recommended prerequisites



Calculus

COMPLETE



Programmable logic controllers

COMPLETE



A Tour of

MATLAB

Features

- Hands-on exercises with MATLAB
- Access to MATLAB through the web



MATLAB Coding Practices for Efficiency and Performance

COMPLETED Access expires Apr 30, 2026 | 1.5 hours | [Share Course](#) | [Certificate & Progress Report](#)
› Course is in 1 learning path(s)



Course Completion Certificate

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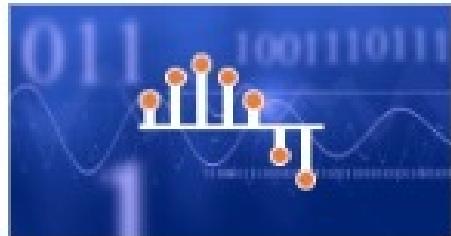
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Signal Generation and Resampling

A handwritten signature in black ink that reads "Ray Santos". It is written in a cursive, flowing style with a horizontal line underneath it.

DIRECTOR, TRAINING SERVICES

10 October 2025



Signal Generation and Resampling

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COMPLETED Access expires Apr 30, 2026 | v1-E

Learn about signal parameters and ways to generate different digital signals. Apply resampling techniques to adjust the signal sample rate without introducing distortions or artifacts.

Course modules

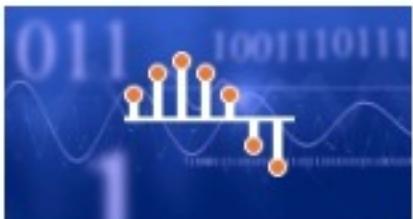
 [Introduction](#) 100% | 5 min

 [Generate Digital Signals](#) 100% | 0.5 hours

 [Resample Signals](#) 100% | 0.5 hours

 [Project](#) 100% | 5 min

 [Conclusion](#) 100% | 5 min



Signal Generation and Resampling

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› Course is in 1 learning path(s)



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Introduction to Symbolic Math with MATLAB



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Introduction to Symbolic Math with MATLAB

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COMPLETED Access expires Apr 30, 2026 | v1-

Learn the basics of symbolic math in MATLAB®. Instead of manipulating and solving equations yourself on paper, why not have MATLAB do it for you?

Course modules

- [Introduction](#) 100% | 5 min
-
- [Symbolic Variables](#) 100% | 10 min
-
- [Mathematical Expressions with Symbolic Variables](#) 100% | 15 min
-
- [Define and Solve Symbolic Equations](#) 100% | 10 min
-
- [Algebraic Manipulation and Simplification](#) 100% | 5 min
-
- [Working with Assumptions](#) 100% | 10 min



Introduction to Symbolic Math with MATLAB

COMPLETED Access expires Apr 30, 2026 | 2 hours | [Share Course](#) | [Certificate & Progress Report](#)



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MATLAB Onramp

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MATLAB Onramp

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[Share Course](#) | [Certificates & Progress Report](#) | [Quick navigation](#) v1 - English (change)

Learn the basics of MATLAB® through this introductory tutorial on commonly used features and workflows. Get started with the MATLAB language and environment so that you can analyze science and engineering data.

Course modules

-  > [Course Overview](#) 100% | 5 min
-  > [Commands](#) 100% | 20 min
-  > [MATLAB Desktop and Editor](#) 100% | 15 min
-  > [Vectors and Matrices](#) 100% | 15 min
-  > [Array Indexing and Modification](#) 100% | 15 min
-  > [Array Calculations](#) 100% | 5 min
-  > [Function Calls](#) 100% | 5 min
-  > [Documentation](#) 100% | 5 min
-  > [Plots](#) 100% | 10 min
-  > [Data Import](#) 100% | 5 min
-  > [Logical Arrays](#) 100% | 5 min
-  > [Programming](#) 100% | 10 min
-  > [Final Project](#) 100% | 10 min
-  > [Conclusion](#) 100% | 5 min



MATLAB Onramp

COMPLETED

2 hours

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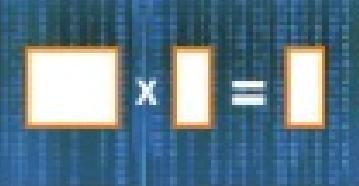
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Calculations with Vectors and Matrices

A handwritten signature in black ink that reads "Craig Santos". It is positioned above a thin horizontal line.

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12 September 2025



Calculations with Vectors and Matrices

[Start course](#)

[Share Course](#) | [Certificate & Progress Report](#)

COMPLETED Access expires Apr 30, 2026 | v1-

Gain a deeper understanding of how to work with matrices and arrays in MATLAB. Learn the difference between element-wise and matrix operations, how to take advantage of implicit expansion, and apply statistical operations to arrays.

Course modules

- [Introduction](#) 100% | 5 min

-
- [Operations on Arrays](#) 100% | 15 min

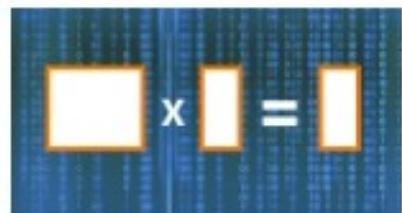
-
- [Statistical Operations on Matrices](#) 100% | 5 min

-
- [Matrix Multiplication](#) 100% | 5 min

-
- [Moving Window Calculations](#) 100% | 10 min

-
- [Projects](#) 100% | 10 min

-
- [Conclusion](#) 100% | 5 min



Calculations with Vectors and Matrices

COMPLETED Access expires Apr 30, 2026 | 1 hour | [Share Course](#) | [Certificate & Progress Report](#)
› Course is in 3 learning path(s)



Course Completion Certificate

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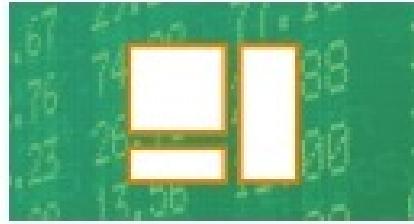
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Make and Manipulate Matrices



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8 September 2025



Make and Manipulate Matrices

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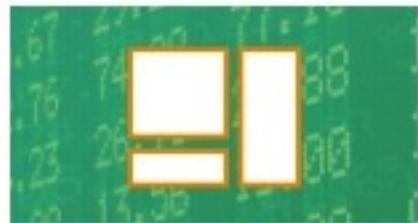
[Share Course](#) | [Certificate & Progress Report](#)

COMPLETED Access expires Apr 30, 2026 | v1

Learn to create arrays in MATLAB with concatenation to build new matrices from existing ones, array creation functions, reshaping arrays, and indexing to extract submatrices.

Course modules

- [Introduction](#) 100% | 5 min
-
- [Array Creation Functions](#) 100% | 20 min
-
- [Build New Matrices from Existing Matrices](#) 100% | 0.5 hours
-
- [Extract and Modify Submatrices](#) 100% | 0.5 hours
-
- [Projects](#) 100% | 10 min
-
- [Conclusion](#) 100% | 5 min



Make and Manipulate Matrices

COMPLETED Access expires Apr 30, 2026 | 1.5 hours | [Share Course](#) | [Certificate & Progress Report](#)

› Course is in 4 learning path(s)



Course Completion Certificate

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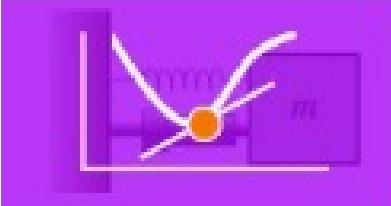
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Solving Ordinary Differential Equations with MATLAB



DIRECTOR, TRAINING SERVICES

25 September 2025



Solving Ordinary Differential Equations with MATLAB

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COMPLETED Access expires Apr 30, 2026 | v1—English (US)

Learn the basics of solving ordinary differential equations in MATLAB®. Use MATLAB® ODE solvers to find solutions to ordinary differential equations that describe phenomena ranging from population dynamics to the evolution of the universe.

Course modules

[Introduction](#) 100% | 5 min

[What is an Ordinary Differential Equation?](#) 100% | 0.5 hours

[Solving ODEs Numerically](#) 100% | 1 hour

[Solving Systems of ODEs Numerically](#) 100% | 1 hour

[Solving Higher-Order ODEs Numerically](#) 100% | 1 hour

[Next Steps](#) 100% | 5 min

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Solving Ordinary Differential Equations with MATLAB

COMPLETED Access expires Apr 30, 2026 | 4 hours | [Share Course](#) | [Certificate & Progress Report](#)