

# Tutorials

Learn how to use Orion with tutorials. We encourage you to contribute by sharing your own tutorial.

## [Provable Multiple Linear Regression Solver: Forecasting AAVE's Lifetime Repayments](#)

For this particular tutorial, we will build a Closed-Form Multiple Linear Regression algorithm and use it to forecast AAVE's (WETH Pool) future projected Lifetime Repayments as a practical example. Towards the second half-end of the tutorial, we will convert the model to Cairo enabling us to make the entire MLR system as well as the forecasts fully provable & verifiable.

December 21, 2023 - Bem Baraki

## [Verifiable Principal Components Analysis](#)

The Principal Component Analysis (PCA) method is an unsupervised learning algorithm that aims to reduce the dimensionality of a dataset consisting of a large number of interrelated variables, while at the same time preserving as much of the variation present in the original dataset as possible.

December 12, 2023 - Dataonchain

## [Verifiable Support Vector Machine](#)

This tutorial will guide you through implementing your first fully verifiable support vector machine model in Cairo using the Orion framework.

September 26, 2023 - 0xd3bs

## [Verifiable Linear Regression Model](#)

This tutorial will guide you through implementing your first fully verifiable linear regression model in Cairo using the Orion framework. It covers replicating a basic linear regression model from Python to Cairo utilizing the Orion library.

August 16, 2023 - Bem Baraki

## [How to implement new operators in Orion?](#)

Would you like to contribute? This is a step-by-step guide to show you how to implement new operators in Orion.

June 23, 2023 - Raphael Doukhan

## [Build Your First Neural Network in Cairo 1.0 Using Orion](#)

In this tutorial, you will be guided on how to train your model using Quantized Aware Training, how to convert your pre-trained model to Cairo 1, and how to perform inference with Orion.

June 8, 2023 - Raphael Doukhan

## [Previous Spaces Next MNIST Classification with Orion](#)

Last updated 2 months ago