

Machine Learning / Initialize Model / Regression

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What is Regression?

Regression algorithms are algorithms that learn to predict the value of a real function for a single instance of data. Regression algorithms can incorporate input from multiple features, by determining the contribution of each feature of the data to the regression function.

Once the regression algorithm has trained a function based on already labeled data, the function can be used to predict the label of a new (unlabeled) instance. For example, a housing price predictor might use a regression algorithm to predict the value of a particular house, based on historical data about regional house prices.

Wondering how to select a regression algorithm? See these topics:

- Machine learning algorithm cheat sheet for Azure ML (<https://azure.microsoft.com/en-us/documentation/articles/machine-learning-algorithm-cheat-sheet/>)

Provides a graphical decision chart to guide you through the selection process

- How to choose Azure Machine Learning algorithms for clustering, classification, or regression (<https://azure.microsoft.com/documentation/articles/machine-learning-algorithm-choice/>)

Explains in greater detail the different types of machine learning algorithms and how they're used

List of Modules

The category Initialize Regression Model includes the following modules:

Module	Description
Bayesian Linear Regression (https://msdn.microsoft.com/en-us/library/azure/dn906022.aspx)	Creates a Bayesian linear regression model
Boosted Decision Tree Regression (https://msdn.microsoft.com/en-us/library/azure/dn905801.aspx)	Creates a regression model using the Boosted Decision Tree algorithm

Decision Forest Regression (https://msdn.microsoft.com/en-us/library/azure/dn905862.aspx)	Creates a regression model using the decision forest algorithm
Fast Forest Quantile Regression (https://msdn.microsoft.com/en-us/library/azure/dn913093.aspx)	Creates a quantile regression model
Linear Regression (https://msdn.microsoft.com/en-us/library/azure/dn905978.aspx)	Creates a linear regression model
Neural Network Regression (https://msdn.microsoft.com/en-us/library/azure/dn905924.aspx)	Creates a regression model using a neural network algorithm
Ordinal Regression (https://msdn.microsoft.com/en-us/library/azure/dn906029.aspx)	Creates an ordinal regression model
Poisson Regression (https://msdn.microsoft.com/en-us/library/azure/dn905988.aspx)	Creates a regression model that assumes data has a Poisson distribution

See Also

Machine Learning / Initialize Model / Classification (<https://msdn.microsoft.com/en-us/library/azure/dn905808.aspx>)

Machine Learning / Initialize Model / Clustering (<https://msdn.microsoft.com/en-us/library/azure/dn905908.aspx>)

Text Analytics (<https://msdn.microsoft.com/en-us/library/azure/dn905886.aspx>)

OpenCV Library Modules (<https://msdn.microsoft.com/en-us/library/azure/dn905946.aspx>)