

Machine Learning in ML Studio

Anomaly Detection

- One-class Support Vector Machine
- Principal Component Analysis-based Anomaly Detection
- Time Series Anomaly Detection\*

Classification

Two-class Classification

- Averaged Perceptron
- Bayes Point Machine
- Boosted Decision Tree
- Decision Forest
- Decision Jungle
- Logistic Regression
- Neural Network
- Support Vector Machine

Multi-class Classification

- Decision Forest
- Decision Jungle
- Logistic Regression
- Neural Network
- One-vs-all

Clustering

- K-means Clustering

Recommendation

- Matchbox Recommender

Regression

- Bayesian Linear Regression
- Boosted Decision Tree
- Decision Forest
- Fast Forest Quantile Regression
- Linear Regression
- Neural Network Regression
- Ordinal Regression
- Poisson Regression

Statistical Functions

- Descriptive Statistics
- Hypothesis Testing T-Test
- Linear Correlation
- Probability Function Evaluation

Text Analytics

- Feature Hashing
- Named Entity Recognition
- Vowpal Wabbit

Computer Vision

- OpenCV Library

<https://studio.azureml.net>

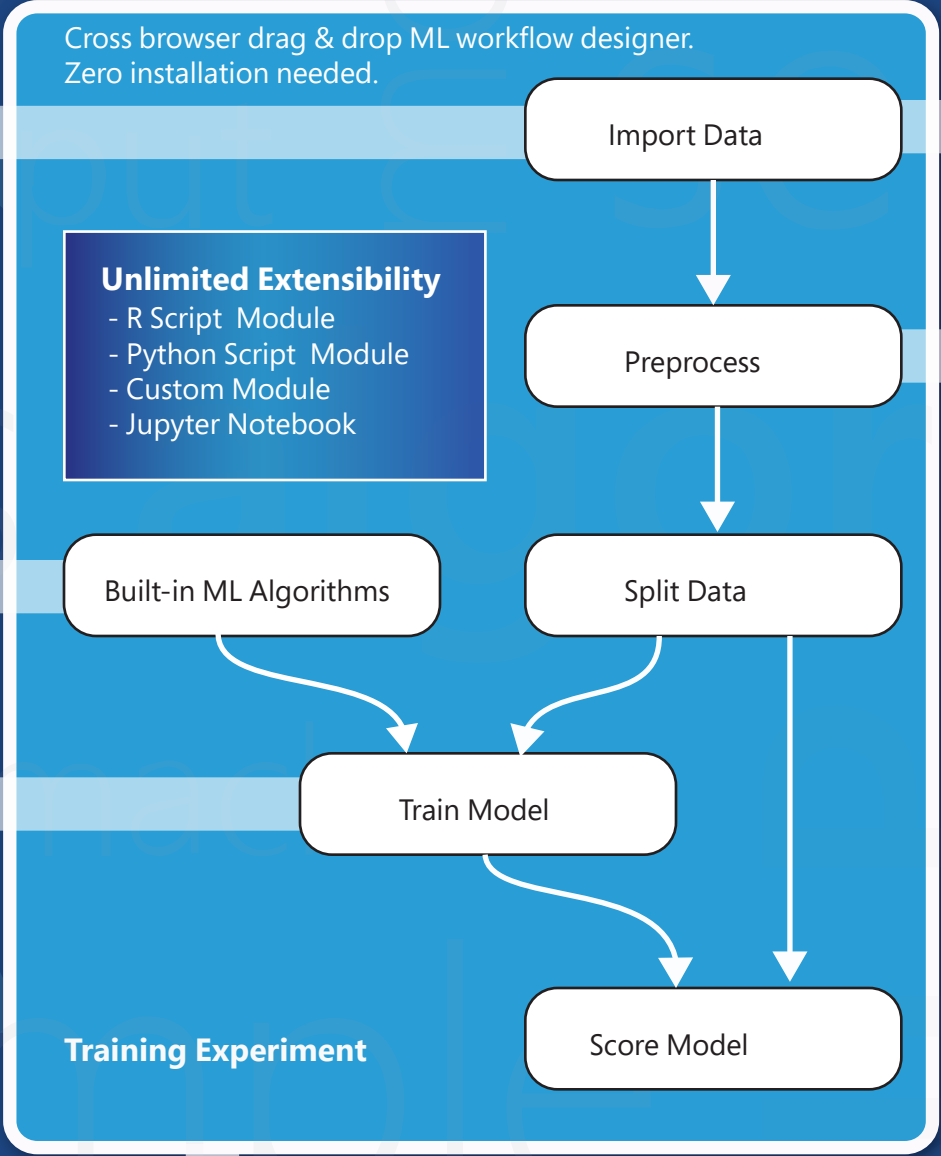
Guest Access Workspace: Free trial access without logging in.  
Free Workspace: Free persisted access, no Azure subscription needed.  
Standard Workspace: Full access with SLA under an Azure subscription.

**Data/Model Visualization**

- Scatterplots
- Bar Charts
- Box plots
- Histogram
- R and Python Plotting Libraries
- REPL with Jupyter Notebook
- ROC, Precision/Recall, Lift
- Confusion Matrix
- Decision Tree\*

**Training**

- Cross Validation
- Retraining
- Parameter Sweep



Data Source	Data Format
- Azure Blob Storage	- ARFF
- Azure SQL DB	- CSV
- Azure SQL DW*	- SVMLight
- Azure Table	- TSV
- Desktop Direct Upload	- Excel
- Hadoop Hive Query	- ZIP
- Manual Data Entry	
- OData Feed	
- On-prem SQL Server*	
- Web URL (HTTP)	

**Data Preparation**

- Clean Missing Data
- Clip Outliers
- Edit Metadata
- Feature Selection
- Filter
- Learning with Counts
- Normalize Data
- Partition and Sample
- Principal Component Analysis
- Quantize Data
- SQLite Transformation
- Synthetic Minority Oversampling Technique

**Enterprise Grade Cloud Service**

- SLA: 99.95% Guaranteed Up-time
- Azure AD Authentication
- Compute at Large Scale
- Multi-geo Availability
- Regulatory Compliance\*

**Community**

- Gallery (<http://gallery.azureml.net>)
- Samples & Templates
- Workspace Sharing and Collaboration
- Live Chat & MSDN Forum Support

\* Feature Coming Soon

**One-click Operationalization**

**Predictive Experiment**

**Make Prediction with Elastic APIs**

- Request-Response Service (RRS)
- Batch Execution Service (BES)
- Retraining API



Azure Machine Learning Studio Capabilities Overview

