

Machine Learning & Analytics Workshop

Overview

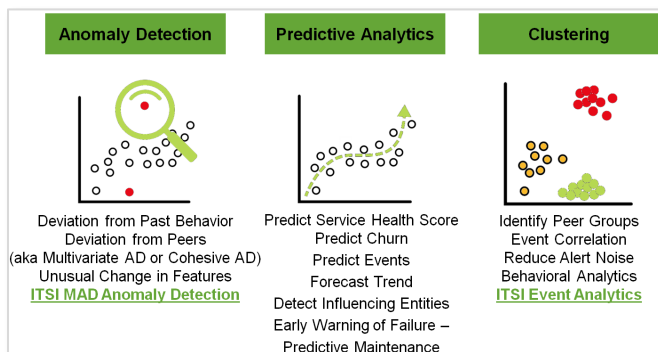
The Machine Learning & Analytics Workshop enables customers to use data science to solve common industry and line of business problems. The Workshop delivers a machine learning roadmap with effort estimates and a gap analysis of skills and data required to execute the roadmap.

ML & Analytics Workshop Review

The Machine Learning & Analytics Workshop will help you understand what is possible using machine data and Splunk's machine learning capabilities to ramp your operational intelligence from reactive to predictive analytics. Our seasoned machine learning consultants will assess your current operational intelligence capabilities based on industry best practices and/or relevant common enterprise requirements in security, IT operations, and line of business operations. The Workshop delivers a machine learning roadmap with effort estimates and a gap analysis of skills and data required to execute the roadmap. Customers looking for help in identifying and prioritizing their ML use cases will find this workshop valuable whether the actual use case development is performed by customer resources or Splunk professional services resources. With the Splunk ML & Analytics Workshop you will:

- **Realize the full value of your Splunk investments:** Build awareness around Splunk that will enable your team to streamline and improve your ML and analytics capabilities.
- **Support data science initiatives:** The workshop will provide guidance to help you implement best practices and address relevant ML requirements for your data science initiatives around machine data.
- **Realize the full value of your machine data investments:** Discover new ways to use your existing machine data to detect anomalies and predict future business behaviors using machine learning.

Typical Splunk ML Use Cases



Your Foundation For Success

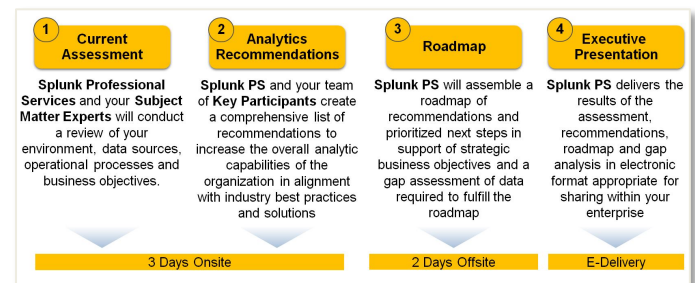
Splunk Professional Services deliver

- **Expert guidance for machine learning & analytics:** Guidance and assistance from an ML consultant with extensive knowledge
- **Agile roadmap development:** Leverage your Splunk ML consultant to help develop and deploy your ML & Analytics roadmap faster than doing it internally
- **Faster time-to-value:** Using Splunk Professional Services provides the most expedient and efficient method to get to actual operational business value.
- **Optimal performance for faster threat or competitive response:** Enable operational models to detect and respond to security, fraud, and competitive threats as quickly as possible.
- **A realistic assessment of your ML and analytics maturity:** Establish a baseline to measure progress and success as your ML and analytics processes evolve.

Engagement Description

These services are backed by Splunk ML and analytics experts, ensuring a consistent and high quality experience and delivery for your enterprise.

Workshop Components Overview



Information gained from the workshop will be used to develop documentation that includes:

- **Splunk PS guidance & recommendations:** Splunk Professional Services will work with you to determine the optimal approach for your ML & analytics requirements.
- **ML program roadmap:** Splunk will create a visual representation of the roadmap to increase the ML capabilities of the organization in alignment with industry best practices and solutions including important milestones.
- **Expected business value:** Splunk will consolidate and project business value measures collected for use cases to be included in your program roadmap.
- **Gap assessment of current environment:** Splunk ML experts will assess the current state of your ML analytics program and the related Splunk deployment and provide a gap assessment to achieve industry best practices.
- **Executive summary and findings presentation:** As part of the service, the lead consultant will provide a written executive summary as well as provide a findings presentation to the project team.

- **Documentation package:** A completed documentation package of all findings, gaps, roadmaps, and the executive summary for review.
- **Duration:** 5 Days

Potential Use Cases

Splunk incorporates machine learning as algorithms integrated in packaged premium solutions like Enterprise Security, IT Service Intelligence, User Behavior Analytics and in the Splunkbase free App called the Machine Learning Toolkit.

Where You Will Find Machine Learning In Splunk



Your professional services consultant will help you leverage the ML algorithms and use cases that fit your customized roadmap.

Examples Use Case Wizards From The Machine Learning Toolkit

Predict Numeric Fields

Predict the value of a numeric field using a weighted combination of the values of other fields in that event. A common use of these predictions is to identify anomalies: predictions that differ significantly from the actual value may be considered anomalous.

- Predict Server Power Consumption
- Predict VPN Usage
- Predict Median House Value
- Predict Power Plant Energy Output

Detect Numeric Outliers

Find values that differ significantly from previous values.

- Detect Outliers in Server Response Time
- Detect Outliers in Number of Logins (vs. Predicted Value)
- Detect Outliers in Supermarket Purchases
- Detect Outliers in Power Plant Humidity

Forecast Time Series

Forecast future values given past values of a metric (numeric time series).

- Forecast Internet Traffic
- Forecast the Number of Employee Logins
- Forecast Monthly Sales
- Forecast the Number of Bluetooth Devices
- Forecast Exchange Rate TWI using ARIMA

Examples Use Case Wizards From The Machine Learning Toolkit (continued)

Predict Categorical Fields

Predict the value of a categorical field using the values of other fields in that event. A common use of these predictions is to identify anomalies: predictions that differ significantly from the actual value may be considered anomalous.

- Predict Hard Drive Failure
- Predict the Presence of Malware
- Predict Telecom Customer Churn
- Predict the Presence of Diabetes
- Predict Vehicle Make and Model

Detect Categorical Outliers

Find events that contain unusual combinations of values.

- Detect Outliers in Disk Failures
- Detect Outliers in Bitcoin Transactions
- Detect Outliers in Supermarket Purchases
- Detect Outliers in Mortgage Contracts
- Detect Outliers in Diabetes Patient Records
- Detect Outliers in Mobile Phone Activity

Cluster Numeric Events

Partition events with multiple numeric fields into clusters.

- Cluster Hard Drives by SMART Metrics
- Cluster Behavior by App Usage
- Cluster Neighborhoods by Properties
- Cluster Vehicles by Onboard Metrics
- Cluster Power Plant Operating Regimes

Prerequisites

The ML & Advisory Workshop is designed for customers with Splunk experience and basic-to-advanced data science expertise who want to accelerate the adoption of machine learning in their operational analytics environment. Customers looking for help in identifying and prioritizing their ML use cases will find this workshop valuable whether the actual use case development is performed by customer resources or Splunk professional services resources.

Splunk's Machine Learning Toolkit is based on the Python programming language, so while not a requirement, it is preferable that the customer either prefers using python for machine learning or does not object to using python when utilizing the machine learning toolkit.

It may be determined that the most effective approach for adoption of machine learning is the utilization of algorithms and processes already incorporated into Splunk premium package solutions. The Splunk consultant may therefore recommend the purchase of the package as the most cost effective and efficient method to implement the workshop derived roadmap.

Free Download: [Download Splunk](#) for free. You'll get a Splunk Enterprise license for 60 days and you can index up to 500 megabytes of data per day. After 60 days, or anytime before then, you can convert to a perpetual Free license or purchase an Enterprise license by contacting sales@splunk.com.