Model Studio 8.3: Getting Oriented

About Model Studio

Model Studio, included in SAS Viya, is an integrated visual environment that provides a suite of analytic data mining tools to facilitate end-to-end data mining analysis. The data mining tools supported in Model Studio are designed to take advantage of the SAS Viya programming and cloud processing environments to deliver and distribute analytic model data mining champion models, score code, and results.

Model Studio is a common interface that contains the following SAS solutions:

- “SAS Visual Forecasting” on page 1
- “SAS Visual Data Mining and Machine Learning” on page 2
- “SAS Visual Text Analytics” on page 2

Note: The visual analytic data mining tools that appear in Model Studio 8.3 are determined by your site’s licensing agreement. Model Studio operates with one, two, or all three of the web-based analytic tools as components of the software.

SAS Visual Forecasting

SAS Visual Forecasting is the next generation forecasting product from SAS. It includes a web-based user interface for creating and running projects to generate forecasts from historical data. SAS Visual Forecasting provides automation and analytical sophistication to generate millions of forecasts in the turnaround time that is necessary to run your business. Forecasters can create projects that contain pipelines, which are visual flow diagrams that run multiple models on the same data set, and choose a champion model based on the results.

SAS Visual Forecasting is built on SAS Viya, an analytic platform powered by SAS Cloud Analytic Services (CAS). As a result, it is designed to effectively model and forecast time series on a large scale with its highly parallel and distributed architecture. This architecture essentially provides a platform for the speed and scalability needed to create the models and to generate forecasts for millions of time series. Massive parallel processing within a distributed architecture is one of the key advantages in SAS Visual Forecasting for large-scale time series forecasting.

Forecasters can develop forecasting projects with data from individual session-scoped libraries or from shared CAS libraries. You can also easily share data, modeling components, and forecasting results without moving data in the CAS environment.

Use this application to do the following tasks:
Perform automatic model and variable selection from your source data.

Generate forecasts automatically by using modeling strategies that are shipped with SAS Visual Forecasting.

Create your own modeling strategies.

Perform hierarchical forecasting.

Visually analyze and diagnose time series data.

Override forecasts using attribute-based filters.

Run disaggregation of overrides using an optimization model with automatic conflict resolution or manual resolution by the user.

Export projects as SAS or Python code for processing in a batch environment.

For more information, see the SAS Help center information about SAS Visual Forecasting: Overview.

SAS Visual Data Mining and Machine Learning

SAS Visual Data Mining and Machine Learning provides true end-to-end analytics. It is a web-based collection of analytic tools and data mining best-practice templates that provides an integrated comprehensive visual data mining and machine learning approach to a wide variety of analytic data mining problems. A selection of beginner, intermediate, and advanced node and pipeline templates enable a broader range of analysts, statisticians, and data scientists to quickly prototype and enhance models for a broad range of analytic business challenges. SAS Visual Data Mining and Machine Learning uses a visual environment to harness the programming power of the SAS CAS environment while leveraging the processing power of cloud computing.

You use the SAS Visual Data Mining and Machine Learning web client to visually assemble, configure, build, and compare data mining models and pipelines for a wide range of analytic data mining tasks. The software provides to new data miners a variety of end-to-end analytical modeling templates as well as the opportunity to create, modify, and save your own data mining tools, templates, and model score codes. SAS Visual Data Mining and Machine Learning provides support for your custom SAS code in the analytic pipeline models that you create.

The software expedites and simplifies model assessment and model pipeline comparisons when evaluating competing analytic models for the role of champion model. SAS Visual Data Mining and Machine Learning readily imports and exports data to other visual SAS analytic applications, as well as SAS Enterprise Miner on SAS 9.4 (and earlier) releases.

You can share projects and analyses developed in SAS Visual Data Mining and Machine Learning among concurrent users. SAS Visual Data Mining and Machine Learning generates APIs that enable model content and score code to be integrated with applications outside of SAS. SAS Visual Data Mining and Machine Learning supports integration with SAS Model Manager as well as many commercial databases.

SAS Visual Data Mining and Machine Learning is designed for data miners of all levels, and most tasks can be used by individuals who have minimal SAS programming or SAS macro language experience.

For more information, see SAS Visual Data Mining and Machine Learning: User’s Guide in the SAS Help Center.

SAS Visual Text Analytics

SAS Visual Text Analytics is a web-based text analytics application that uses contextual analysis to provide a comprehensive solution to the challenge of identifying and categorizing key textual data. Using this application, you can build models (based on training documents) that automatically analyze and categorize a set of documents. You can then customize your models in order to realize the value of your text-based data.

SAS Visual Text Analytics combines the machine-learning capabilities of SAS Text Miner with the rules-based linguistic methods of categorization and extraction in SAS Enterprise Content Categorization. These capabilities, along with document-level sentiment scoring, are combined in a single user interface.
Using SAS Visual Text Analytics, you can identify key textual data in your document collections, categorize those data, build concept models, and remove meaningless textual data.

By default, words that provide little or no value are excluded from analysis. Examples of these words include the articles *a*, *an*, and *the* and conjunctions such as *and*, *or*, and *but*. Other terms that are specific to your document collection but provide little or no value are also identified and excluded.

SAS Visual Text Analytics is designed for users who have no SAS programming or SAS macro language experience.

For more detailed information, see the SAS Help Center content on SAS Visual Text Analytics: User's Guide.