Viscovery SOMine | Data Mining Suite

Workflow-oriented software suite based on self-organizing maps (SOM) and multivariate statistics for explorative data mining and predictive modeling

General Features of the System

Project environment

- ■ Analytical work organized in projects, providing focused navigation through the application
- ■ Goal-oriented operation, shielding the user from the technology core and the statistical algorithms
- ■ Projects, consisting of up to 6 workflows, provided for data import and preprocessing, SOM creation and exploration, classification, prediction, and scoring
- ■ Project workflows, optionally processed with minimal user interaction
- ■ Administration of projects, performed in directories with "clean directories" function

Workflow orientation

- ■ Dedicated workflows, each consisting of 4 steps, with clear tasks
- ■ Steps providing proven default settings
- ■ Workflow branching allowing generation of model variations
- ■ Functions allowing parameterizations to be copied between workflow steps
- ■ Workflow branch sorting with drag-and-drop function

Reporting and documentation

- ■ Instant, on-demand reports for each workflow step as well as the entire workflow
- ■ Dynamic reporting of setting differences between steps in a branching
- ■ Integrated documentation for projects
- ■ Production journal of created models
- ■ Functions for adding descriptions and detailed comments to attributes, clusters, and models

Usability

- ■ Informative pop-ups throughout the system, as well as supportive context menus in numerous places
- ■ Multiple handling tools, such as quick search for strings and sortable tables
- ■ Transfer of attribute selections and retention of attribute order between lists with copy and paste
- ■ Function for saving combinations of visible windows with selected properties as "Arrangements"
- ■ Multiple options for setting preferences for charts, tables, statistics, modeling, and visualization
- ■ Online help function and comprehensive user manual

Proprietary Data Formats

Viscovery projects

- ■ *.visdm files: proprietary format for Viscovery data mining project files, which contain all relevant information of a Viscovery SOMine analysis project, including all preprocessing and other settings
- ■ Earlier Viscovery project file formats (*.visdm, *.vsp, *.csp, and *.vpp from version 4, 5, 6 and 7 of Viscovery SOMine, Viscovery Profiler, and Viscovery Predictor) can be imported

Viscovery® SOMine 8 – Data Sheet

Viscovery data marts

- ■ *.dms files: Viscovery data mart files, containing preprocessing and other meta information
- ■ *.dmd files: associated Viscovery data mart files, containing portions of imported data, optimized for rapid access

Viscovery models

- ■ *.som files: Viscovery SOMine model files, which contain the SOM data representation, including preprocessing settings, formulas, clusters, and predictive modeling definitions
- ■ Older Viscovery model file formats (*.som of versions 4, 5, 6 and 7 of Viscovery SOMine, Viscovery Profiler, and Viscovery Predictor) can be imported
- ■ Import of original SOM_PAK model files (*.cod)

Technical Requirements and Configuration

Minimum workstation configuration (recommended configuration)

- ■ 2 GHz CPU (3 GHz or higher)
- ■ 4 GB RAM (8 GB or more)
- ■ Windows 10 or newer
- ■ 64-bit OS
- ■ 24 bit color graphics, 1280 x 800 (1650 x 1080 or higher)
- ■ Required disk space is 6 times the size of the analyzed data file (10 times for comfortable project work)

Modular software configuration

- ■ The minimum configuration of Viscovery SOMine consists of the **Visual Explorer** core module.
- ■ For advanced exploration, clustering, classification and prediction, the **Cluster and Classify** and **Predict and Score** extension modules are available.
- ■ The **Enterprise Data** extension module provides enhanced features for data import and handling, as well as for the analyses of very high-dimensional and voluminous data.
- ■ Each workflow can be automated using the corresponding **Workflow Automation Service**, which is available as part of an additional package for the corresponding modules.

Licensing

- ■ A single-user term license for the basic module Visual Explorer can be acquired free of charge.
- ■ Each modular configuration is available with a perpetual license or, alternatively, with a term-license for a specified period of time.
- ■ Each modular configuration is available as a single-user license or as a network license.
- ■ Single-user licenses are bound to the user account on a single computer and may be transferred to a different computer system twice per year.
- ■ Network licenses allow operation of the software for a defined maximum of concurrent users and require the additional installation of the Viscovery License Server.
- ■ Each licensed user may operate one interactive instance of the software at a time.
- ■ All configuration and validity information regarding licenses is coded in unique license keys.
- ■ Software installation requires administrator privileges and Internet connectivity.
- ■ License activation requires Internet connectivity.
- ■ To verify the continued validity of the license an internet connection is required at least every 30 days.