

51st World Continuous Auditing & Reporting Symposium

Advancing Analytics with IDEA Lab

Powering Innovation and Audit Advancement

PRESENTERS:

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CaseWare IDEA

Lead the industry with powerful, comprehensive data analytics solution for every audit and risk management need that is secure, easy-to-use, scalable and trusted by audit professionals globally.





Advanced Analytics at Your Fingertips

IDEA Lab

Access, download,
comment on plugins

Analytical Plugins

IDEAScript macros
Python scripts
AI & Machine Learning

Applications

Outlier Detection
Data Profiling
Unstructured Data
Analysis and more

IDEA Lab serves two types of users



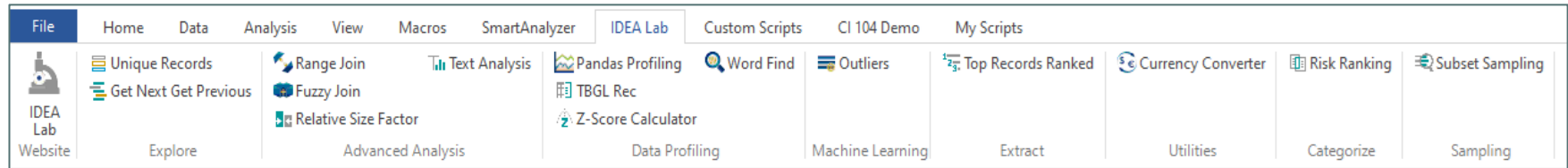
Power users



Other users

The languages we use to build IDEA Lab plugins:

- IDEAScript
- Python
- Hybrid | Python and IDEAScript





IDEALib.py Module

- Easy transfer of IDEA data files to a panda dataframe
- IDEALib.py also enables transfer of a panda dataframe to an IDEA file
- Once the data is in Python you can perform any analysis on it that Python or a Python module is capable of.

DEMONSTRATION



Relative Size Factor (RSF) Plugin

- Flags suspicious transactions in your data
- Identifies where the largest AMOUNT field value for subsets is outside the norm
- Compares the top two AMOUNT field values for each subset and calculates the RSF for each
- Learn more in “**Forensic Analytics: Methods and Techniques for Forensic Accounting Investigations**”, Second Edition, Author: Mark J. Nigrini (Chapter 7)

Text Analysis Plugin - Python

- The Text Analysis plugin performs analysis on the text of one or more reports .
- The results of the analysis are shown in three IDEA databases:
 - Sentiment analysis report
 - Word frequency bar charts
 - Word cloud
- The plugin also allows you to perform a word search over all the selected documents.



Data Profiling Plugin - Python

- Overall insight into a database in a click
- Performs breakdown by field, providing in-depth statistics as well as correlation among different fields
- Excellent approach to understanding all fields within a database and its contents
- This plugin is created entirely in Python

When to Use IDEAScript vs Python



- IDEA has dozens of built in functions, they should be used through IDEAScript
- Use Python where IDEA doesn't have the proper functions or can not perform the analysis easily
- Ultimately it should come down to which is the most efficient approach to create the script

Questions?



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