TreeScan Version History

SUMMARY

2011 **Version 1.0:** Poisson model, Bernoulli model
2014 **Version 1.1:** Tree-temporal scan statistic. Statistical power estimation. Data import wizard. Improved user interface.
2015 **Version 1.2:** Tree-temporal scan statistic adjusted for overall temporal pattern. Purely temporal scan statistic. Day of week adjustment.
2016 **Version 1.3:** Scan multiple trees and allowing for nodes with multiple parents. Statistical power estimation for the conditional Bernoulli, tree-temporal and purely temporal scan statistics.
2018 **Version 1.4:** Differential follow-up time.
2022 **Version 2.0:** Prospective analysis, Sequential Tree Scan Statistic, Bernoulli tree-time, Temporal graphs.
2022 **Version 2.1:** Whole tree visualizations.
2024 **Version 2.2:** Scan for high, low, and high or low cuts, early termination, ignore records outside data time range.

DETAILS

Version 2.2, January 2024

New Analytical Features

Added option to scan for high, low, and high or low cuts simultaneously.
Added option to ignore records in case/control files that are outside the data time range.
Added p-value option for early termination.
Added sequential tree scan statistic for unconditional and conditional Poisson.

Other Improvements

Added option that excludes parent cuts in analysis results which are identical to child cuts.
Added non-analytical option to specify the distance between tree nodes (default 1). The distance between nodes is used when displaying the Newick tree in output files.
Added non-analytical option which permits providing a descriptive name to tree nodes.
Improved temporal graphs file to allow for the selective display of cut graphs, which allows for faster loading time and better comparison.
The histograms of the temporal graphs now display as stacked verses overlapping.
Added tree verification option to allow/disallow multiple root nodes in the tree (default allow).
Added tree verification option to allow/disallow nodes with multiple parents (default disallow).
Added tree verification option to enforce data is on leaves of tree only (default enforce).
Added alternative file browsing option which can improve browsing time.
Revised file path resolution issue in parameter file on Windows.
Minor improvements to Linux rpm installer.

Minor Fixes

Corrected the sorting behavior in the table of the HTML results file.
Corrected bug when the user specified an alternative randomization seed.

Version 2.1.1, November 2022

Minor Fixes

Correction in the reported expected, relative risk, excess cases and attributable risk for the temporal only or tree temporal scan with conditional Bernoulli.

Version 2.1, July 2022

New Analytical Features

Added ability to generate output files which can visualize entire tree along with analysis results.

Version 2.0, February 2022

New Analytical Features

Added prospective analysis option for tree-time/time-only scans.
Added Sequential tree scan statistic (Unconditional Bernoulli).
Added Bernoulli tree-time analysis.
Temporal graphs in HTML format, depicting the observed and expected counts over time, both inside and outside the cluster.

Other Improvements

Ability to choose between generic date ranges and date-based ranges.
Added option to color tree visualization by recurrence interval.
Installation now bundles Java, so that it does not have to be pre-installed.
The GUI was revised to switch the order of the Input and Analysis tabs.
Added option to input control file separately from count file.
Added ability to restrict the minimum number of cases in scanned nodes.
Added ‘Parent Node’ column to results files.

Minor Fixes

Self-referencing nodes in tree-file generate error.
File wizard correction when selecting 'First row is column header' while saving import settings (verse importing now).
Last generated results file no longer truncated when opening parameter file in GUI.

Version 1.4, June 2018

New Analytical Features

Differential follow-up time with temporal scan statistics.
Multiple ranges in the data time range.
Scanning risk window parameters.
Tree visualization in html output file.

Minor Fixes

Mac version updated to work with Oracle Java 9.

Version 1.3, August 2016

New Analytical Features

Scan multiple trees simultaneously.
Allows for leaves and nodes with multiple parents.
Statistical power estimation for the conditional Bernoulli model.
Statistical power estimation for the tree-temporal scan statistic.
Statistical power estimation for the purely temporal scan statistic.

Ability to restrict the scanning to only certain pre-specified levels of the tree.

Minor Fixes
Correction in import wizard that causes memory leak when importing file.
Correction to command-line override of randomization seed.

Version 1.2, November 2015
New Analytical Features
Tree-temporal scan statistic, conditioned on node and time, to adjust for overall temporal pattern.
Purely temporal scan statistic.
Adjustments for day of week and node-by-day of week interaction.
Calculation of attributable risk.

Other Improvements
Improved import wizard.
New example data sets.
Relative risk reported for all scan types, replacing observed divided by expected.
Tree structure attributes reported in the data summary.

Version 1.1.2, March 2015
Minor Fixes
Correction to v1.1.1 random data generation for unconditional Poisson power estimation.

Version 1.1.1, March 2015
Improvements
Statistical power estimates reported to a tabular file.

Minor Fixes
Correction to log likelihood tie-breaking mechanism when calculating p-values.
Correction to random data generation for conditional Poisson power estimation.

Version 1.1, November 2014
New Analytical Features
Tree-temporal scan statistic.
Statistical power estimation.

Other Improvements
Data import wizard
Advanced graphical user interface options
Application update feature
Improved command-line options
Improved user interface
TreeScan user guide in .pdf format
New TreeScan logo and icon

Version 1.0, 2011

Analytical Features
Poisson model

Bernoulli model
Simple, pairs, triples and ordinal cuts, defined by a cut type file

Other Improvements
Separate case and tree input files
Graphical user interface
HTML results file
Comma separated value (CSV) results data file
Parallelized simulations