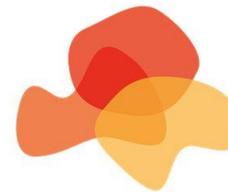# AKAI KAERU, LLC
Visual Analytics for Complex Data

Explainable AI

AI-Powered Data Analytics
Made Transparent

Develop Decision Strategies With Confidence, Visually

AI systems tend to operate in the darkness of black boxes. Input data are transformed into decisions without much human-readable justification.

Akai Kaeru's **Explainable AI** software discovers and visually explains interesting patterns and causal relations in complex data, supporting data analysts in the construction of trustable decision-making AI models.

The **Data Context Map** visual layout visualizes both patterns and relations in an integrated and intuitive fashion. Analysis can freely interact with this visual layout to explore new patterns and relations.
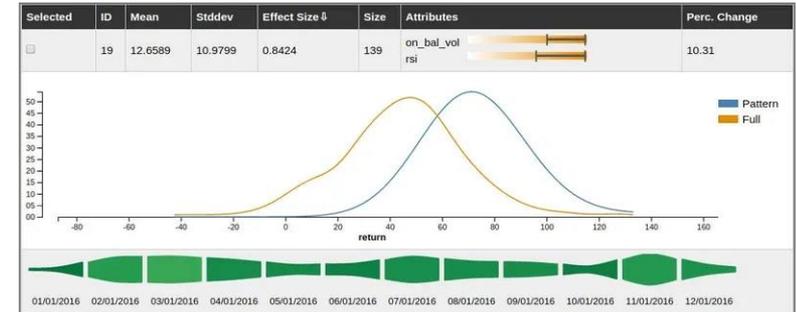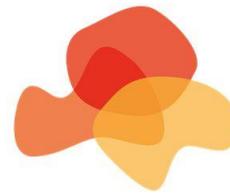

The distribution of a significant data pattern
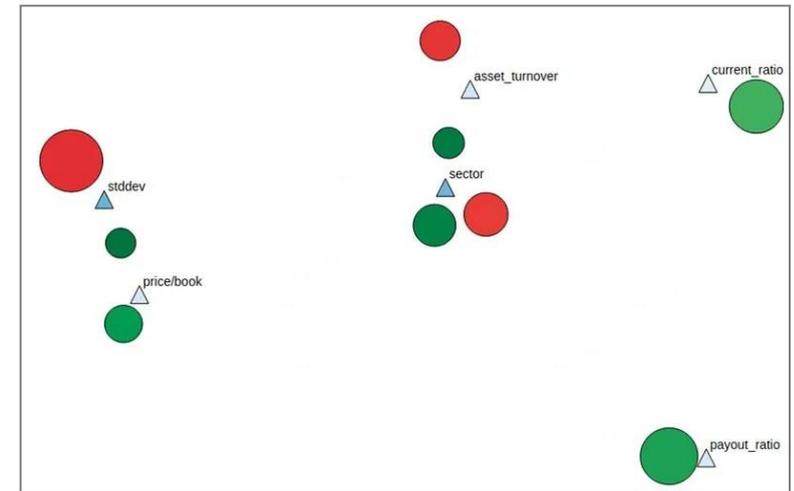
Contextual plot of several significant data patterns

Reduce Information Overload by Causal Analysis

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Visual Analytics for Complex Data

A common headache for data analysts is how to pick a manageable set of meaningful attributes and features from a list of hundreds or more. Akai Kaeru's new approach to data analysis puts an end to this guessing game.

The **Visual Causal Analyst** distills correlations that exist among these patterns into a terse set of causal relations. This process eliminates all spurious correlations and makes it easy to discern the true interactions that exist in the data.

The **Causal Graph** visualizes the causal relations as a network.
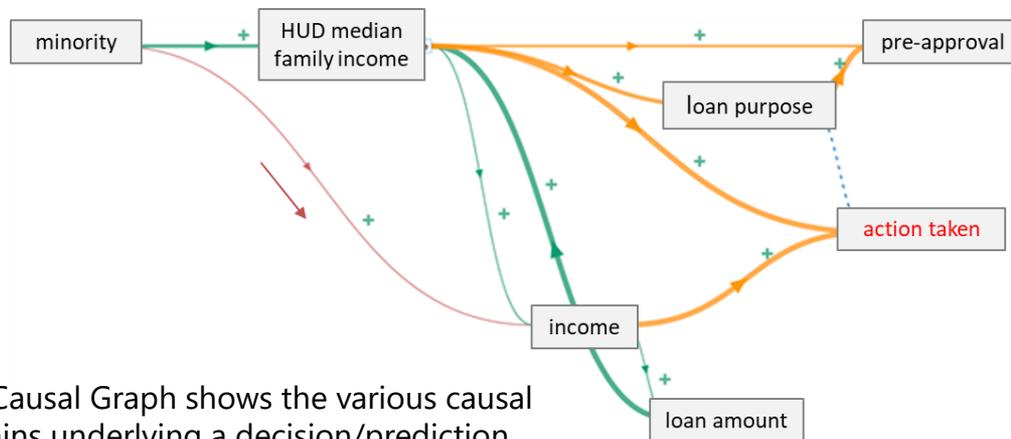
The Causal Graph shows the various causal chains underlying a decision/prediction
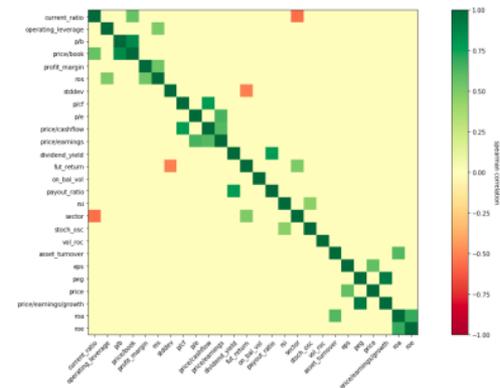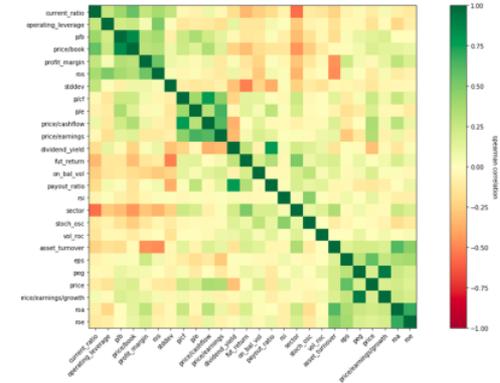
Eliminated all spurious correlations, resolving

85%

of the data complexities

A Quick Tour

After loading the data a user typically proceeds as follows:

1. Specify the Dependent Variable
    → the program computes a set of interesting subspace patterns

2. Browse the List View to inspect the probability distributions of these interesting subspace patterns
    → the user can now select the patterns of particular interest

3. Switch to the Data Context Map to visualize the subspace clusters in the context of their defining attributes
    → the user can inspect the subspace patterns in a popup window

4. Inspect the Causal Relationships among the subspace clusters
    → the user can select casual relationship edges for more detail
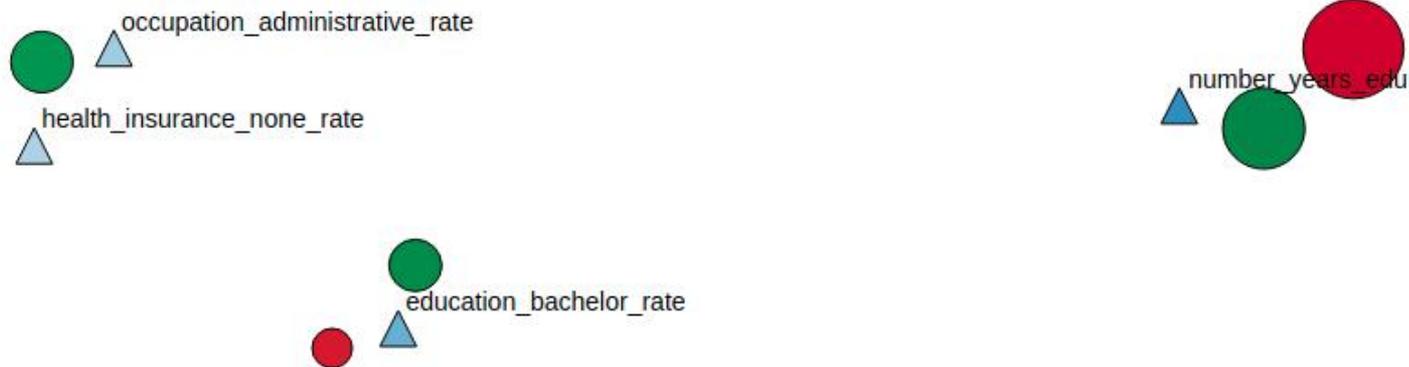
2. Browse the List View
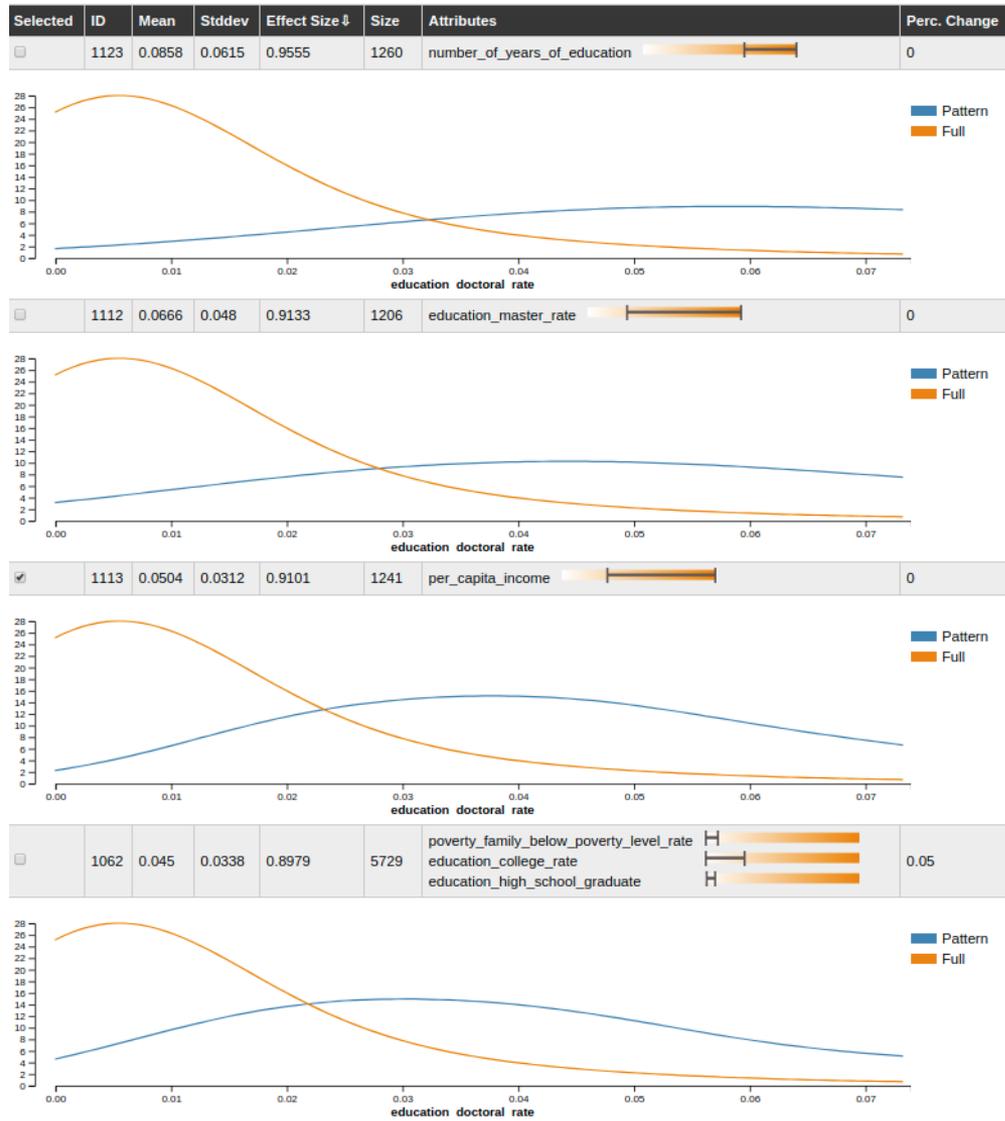
List of statistically significant patterns
- visualizes summaries of the extracted relevant patterns
- users can compare the probability distributions of the patterns vs. the full dataset
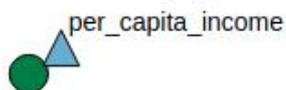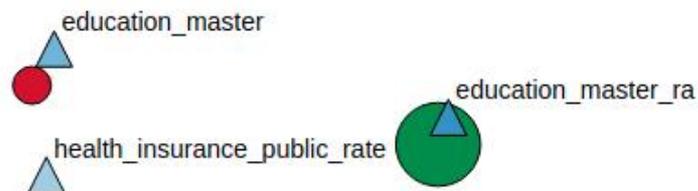- users can select interesting patterns for visualization in the data context map (next step)

Shown here is the "Census" data set
- 148 variables, 70,000 data points
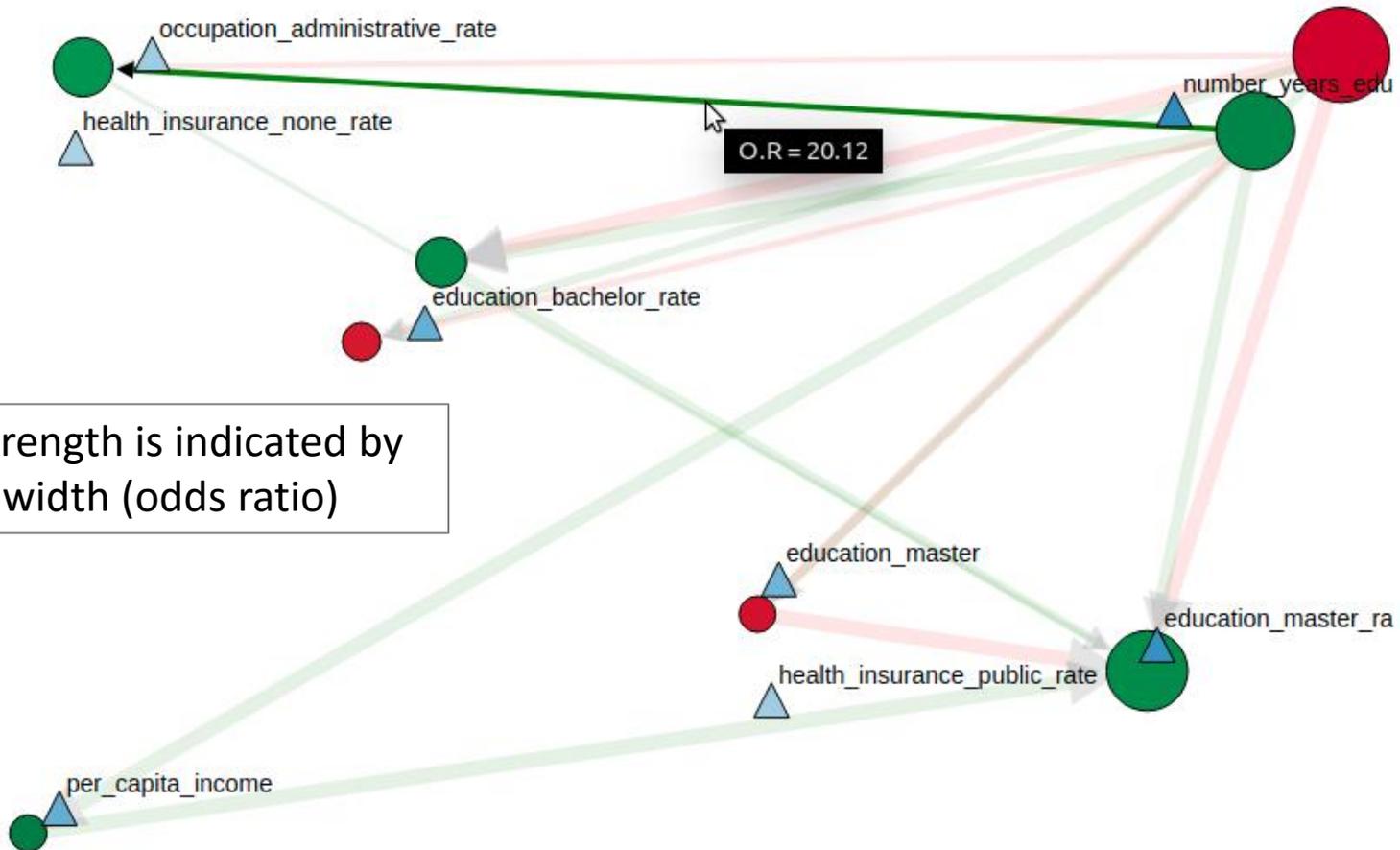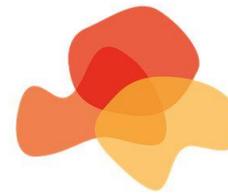- the chosen dependent variable is 'doctoral education rate'

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occupation_administrative_rate

number_years_edu

health_insurance_none_rate

education_bachelor_rate

Nodes are placed near the attributes that define the pattern

education_master

education_master_ra

health_insurance_public_rate

per_capita_income

Red/green nodes represent patterns with unusually low/high target attribute

Causal strength is indicated by edge width (odds ratio)

Causal relationships between patterns are represented by red/green directed edges

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Schedule a Demo

SEND EMAIL to: info@akaikaeru.com

VISIT: http://akaikaeru.com