

Open for Innovation

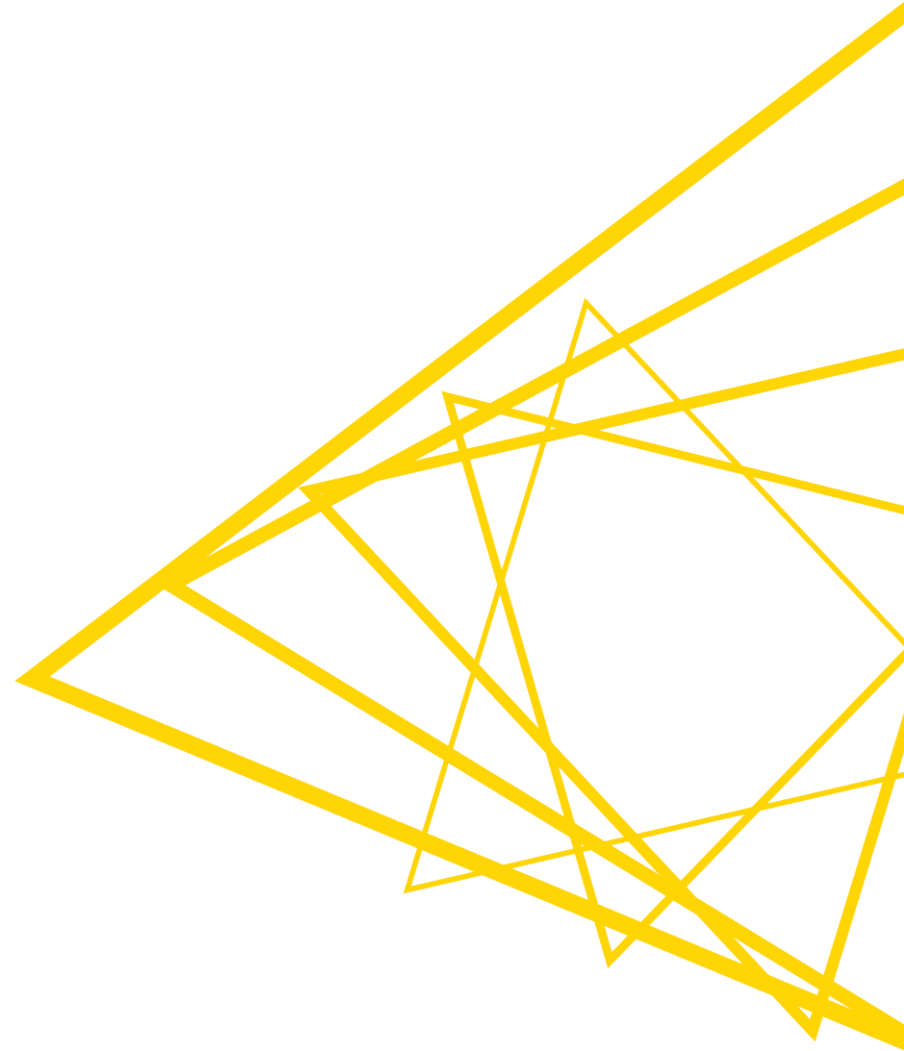
**KNIME**

# **KNIME Verified Components**

Reuse and bundle functionality

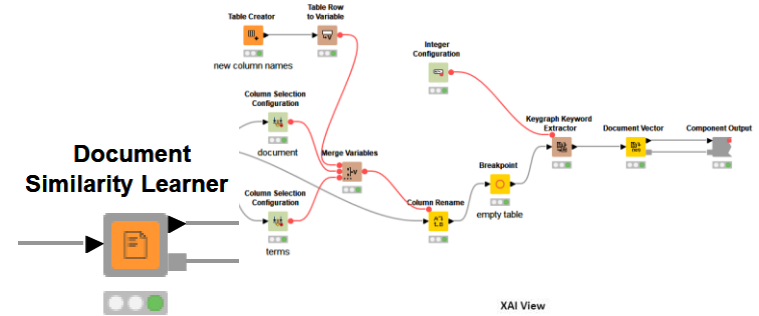
**Jeany Prinz for the components team**

November 19th, 2020

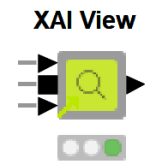


# Shared Components

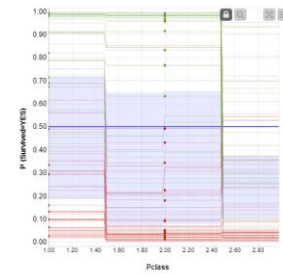
- Components encapsulate and abstract functionality
- Components can have their own dialog, and their own composite, interactive views
- Components can be saved in your KNIME workspace, KNIME Server or the KNIME Hub for later reuse



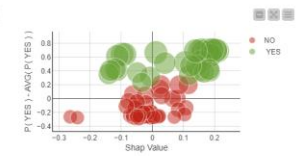
XAI View  
Model: XGBoost Trees - Target: Survived - Type: Binary - Class: YES



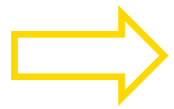
Partial Dependence Plot



Explanations Bubble Chart



Explanations Feature Violins



Sharable, reusable, bundled functionality. Possible to create reusable components that behave like KNIME nodes!

# KNIME Verified Components

- [Verified Components](#) reuse bundled functionalities, verified by KNIME experts
- Released and updated on the [KNIME Hub](#)

**Text Processing**

- Document Pre-processing
- Document Similarity Learner
- Document Similarity Predictor
- PubMed Document Extractor

**Data Manipulation**

- Interactive Data Cleaning
- Interactive Data Cleaning
- Column Name Editor
- Column Filter (by Index)
- Quantile Normalization

**Model Interpretability**

- K-means LIME
- Compute LIME
- SHAP Summarizer
- Partial Dependence Pre-processing

**Guided Analytics**

- Classification Threshold Analysis

**Automation**

- Parameter Optimization
- Dimensionality Reduction (LDA)
- Optimized K-Means (Silhouette Coefficient)
- Analyze Workflow Summary
- Embed Data Into Workflow
- Dimensionality Reduction (LDA)

**Life Sciences**

- Molecular Properties Filter
- PDB Data Extractor
- CHEMBL Bioactivities
- Download FASTQ files from ENA
- CHEMBL Structure Search
- PDB Chemical Structure Search
- Pathway Enrichment Analysis
- CHEMBL Lookup
- CHEMBL Details

**Financial Analysis**

- ARR and MRR by Time-based Cohort
- Anual prices to one-period (log) returns
- Calculate Recurring Values
- One-period returns to multi-period returns
- One-period log returns to multi-period log returns
- Customer Count and Churn Rate by Time-based Cohort

**Visualizations**

- Sequence Logo
- Hierarchical Clustering and Heatmap
- Choropleth World Map

**Time Series**

- Discrete Wavelet Transform (DWT)
- Fast Fourier Transform (FFT)
- Remove Seasonality
- ARIMA Learner
- ARIMA Predictor
- Analyze ARIMA Residuals
- ARIMA Predictor
- Decompose Signal
- Return Seasonality
- Auto ARIMA Learner
- Spark Lag Column
- Timestamp Alignment
- Aggregation Granularity
- Inspect Seasonality

# Do It Yourself!

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- Join us in the workshop **Building Reliable and Reusable Components!**
- Learn how to build and share reliable and user-friendly components that act just like standard KNIME nodes
- Choose from different areas: [Financial Analysis](#), [Life Sciences](#), [Automation](#)
- When? Friday November 20<sup>th</sup>, 10 AM - 12 PM UTC -6 (Chicago)



**Thank you!**

