

Info

Setup

Authentication

SSL

Sources

Database

Books

(i)

 Configure MongoDB instance

Host

mongodb://localhost:27017/

(i)

Port

27017

(i)

 Specify MongoDB connection string

URI

mongodb://localhost:27017/

(i)

[Set injected parameters](#)

An injected parameter is a parameter whose value is provided by an external source.

 Test connection

Test successful.

 Save

Cancel

<new process*> – RapidMiner Studio Educational 10.3.001 @ MANAGERONE

File Edit Process View Connections Settings Extensions Help

Views: Design Results Turbo Prep Auto Model Interactive Analysis

Find data, operators...etc All Studio

Repository

Import Data

Training Resources (connected)

Community Samples (connected)

Samples

Books Repository (Local)

Connections

Books (6/24 4:18 PM – 2 kB)

books Temp 53036 (6/24 12:09 PM – 4.6 MB)

Local Repository (Local)

DB (Legacy)

Process

Process

Process

inp

out

Retrieve Books

out

Parameters

Process

logverbosity init

logfile

resultfile

random seed 2001

send mail never

encoding SYSTEM

Operators

Search for Operators

Data Access (68)

Blending (81)

Cleansing (28)

Modeling (167)

Scoring (13)

Validation (30)

Utility (85)

Extensions (53)

Hide advanced parameters

Change compatibility (10.3.001)

Help

Process

RapidMiner Studio Core

Synopsis

The root operator which is the outer most operator of every process.

Description

Each process must contain exactly one operator of this class, and it must be the root operator of the process. This operator provides a set of parameters that are of global relevance to the process like logging and initialization parameters of the random number generator.

Leverage the Wisdom of Crowds to get operator recommendations based on your process design!

Activate Wisdom of Crowds

Get more operators from the Marketplace

logverbosity (optional)

<new process*> – RapidMiner Studio Educational 10.3.001 @ MANAGERONE

File Edit Process View Connections Settings Extensions Help

Views: Design Results Turbo Prep Auto Model Interactive Analysis

Find data, operators...etc All Studio

Repository

+ Import Data

Training Resources (connected)

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Books Repository (Local)

Connections

Books (6/24 4:18 PM – 2 kB)

books Temp 53036 (6/24 12:08 PM – 4.6 MB)

Local Repository (Local)

DB (Legacy)

Process

Process

Process

inp res res

Retrieve books Temp 53036

out ✓ ⚠

```
graph LR; A[Retrieve books Temp 53036] -- out --> B(( )); B -- res --> C(( ));
```

Parameters

Retrieve books Temp 53036 (Retrieve)

repository entry //Books Repository/books T

Help

Retrieve

RapidMiner Studio Core

Tags: Load, Import, Read, Datasets, Examples, Example Set, Table, Repository, Data Access

Synopsis

This Operator can access stored information in the Repository and load them into the Process.

[Jump to Tutorial Process](#)

Description

The Retrieve Operator loads a RapidMiner Object into the Process. This Object is often an ExampleSet but it can also be a Collection or a Model. Retrieving data this way also provides the meta data of the RapidMiner Object.

Leverage the Wisdom of Crowds to get operator recommendations based on your process design!

Activate Wisdom of Crowds

Operators

generate st

Blending (2)

Attributes (2)

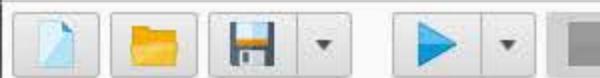
Generation (2)

Generate Aggregation

Generate Weight (Stratification)

We found "LifeStyle Marketing", "Reporting Extension" and one more result in the Marketplace.

Show me!



Result History

ExampleSet (Retrieve books Temp 53036)

ExampleSet (//Books Repository/books Temp 53036)

ExampleSet (//Books Repository/books Temp 53036)



Data

Open in Turbo Prep Auto Model Interactive Analysis

Filter (5,862 / 5,862 examples): all

Row No.	book_id	goodreads...	best_book_id	work_id	books_count	isbn	isbn13	authors	original_pub...	original_title	title	language_...
1	4	2657	2657	3275794	487	61120081	9780061120...	Harper Lee	1960	To Kill a Mock...	To Kill a Mock...	eng
2	5	4671	4671	245494	1356	743273567	9780743273...	F. Scott Fitzge...	1925	The Great Ga...	The Great Ga...	eng
3	6	11870085	11870085	16827462	226	525478817	9780525478...	John Green	2012	The Fault in ...	The Fault in ...	eng
4	7	5907	5907	1540236	969	618260307	9780618260...	J.R.R. Tolkien	1937	The Hobbit or...	The Hobbit	en-US
5	8	5107	5107	3036731	360	316769177	9780316769...	J.D. Salinger	1951	The Catcher i...	The Catcher i...	eng
6	10	1885	1885	3060926	3455	679783261	9780679783...	Jane Austen	1813	Pride and Pre...	Pride and Pre...	eng
7	11	77203	77203	3295919	283	1594480001	9781594480...	Khaled Hoss...	2003	The Kite Run...	The Kite Run...	eng
8	13	5470	5470	153313	995	451524934	9780451524...	George Orwe...	1949	Nineteen Eig...	1984	eng
9	14	7613	7613	2207778	896	452284244	9780452284...	George Orwell	1945	Animal Farm:...	Animal Farm	eng
10	15	48855	48855	3532896	710	553296981	9780553296...	Anne Frank, ...	1947	Het Achterhui...	The Diary of a...	eng
11	22	12232938	12232938	1145090	183	316166685	9780316166...	Alice Sebold	2002	The Lovely B...	The Lovely B...	eng
12	28	7624	7624	2766512	458	140283331	9780140283...	William Goldi...	1954	Lord of the Fli...	Lord of the Fli...	eng
13	29	18135	18135	3349450	1937	743477111	9780743477...	William Shak...	1595	An Excellent c...	Romeo and J...	eng
14	30	8442457	19288043	13306276	196	297859382	9780297859...	Gillian Flynn	2012	Gone Girl	Gone Girl	eng
15	31	4667024	4667024	4717423	183	399155341	9780399155...	Kathryn Stock...	2009	The Help	The Help	eng
16	32	890	890	40283	373	142000671	9780142000...	John Steinbeck	1937	Of Mice and ...	Of Mice and ...	eng
17	33	930	929	1558965	220	739326228	9780739326...	Arthur Golden	1997	Memoirs of a ...	Memoirs of a ...	eng
18	35	865	865	4835472	458	61122416	9780061122...	Paulo Coelho...	1988	O Alquimista	The Alchemist	eng
19	38	14050	18619684	2153746	167	965818675	9780965818...	Audrey Niffen...	2003	The Time Tra...	The Time Tra...	eng
20	40	19501	19501	3352398	185	143038419	9780143038...	Elizabeth Gilb...	2006	Eat, pray, love...	Eat, Pray, Love	eng
21	43	10210	10210	2977639	2568	142437204	9780142437...	Charlotte Bro...	1847	Jane Eyre	Jane Eyre	eng
22	45	4214	4214	1392700	264	770430074	9780770430...	Yann Martel	2001	Life of Pi	Life of Pi	?
23	46	43641	43641	3441236	128	1565125606	9781565125...	Sara Gruen	2006	Water for Ele...	Water for Ele...	eng
24	47	19063	19063	878368	251	375831002	9780375831...	Markus Zusak	2005	The Book Thief	The Book Thief	eng
25	48	4381	4381	1272463	507	307347974	9780307347...	Ray Bradbury	1953	Fahrenheit 451	Fahrenheit 451	spa
26	50	30119	30119	30518	45	60513039	9780060513...	Shel Silverste...	1974	Where the Si...	Where the Si...	eng
27	55	5129	5129	3204877	515	60929871	9780060929...	Aldous Huxley	1932	Brave New W...	Brave New W...	eng
28	57	37435	37435	3275013	125	142001740	9780142001...	Sue Monk Kidd	2001	The Secret Lif...	The Secret Lif...	en-US
29	58	2956	2956	1835605	2277	142437174	9780142437...	Mark Twain, J...	1884	The Adventur...	The Adventur...	eng
30	59	24178	24178	987048	180	64410935	9780064410...	E.B. White, G...	1952	Charlotte's W...	Charlotte's W...	eng
31	60	1618	1618	4259809	183	1400032717	9781400032...	Mark Haddon	2003	The Curious I...	The Curious I...	eng
32	61	22557272	22557272	41107568	14	1594633665	9781594633...	Paula Hawkins	2015	The Girl on th...	The Girl on th...	eng
33	63	6185	6185	1565818	2498	393978893	9780393978...	Emily Brontë...	1847	Wuthering He...	Wuthering He...	eng

ExampleSet (5,862 examples, 0 special attributes, 23 regular attributes)

Repository

Import Data

- ▶ Training Resources (connected)
- ▶ Community Samples (connected)
- ▶ Samples
- ▶ Books Repository (Local)
 - ▶ Connections
 - ▶ Books (6/24 4:18 PM – 2 kB)
 - ▶ books Temp 53036 (6/24 12:09 PM – 4.5 MB) Selected
- ▶ Local Repository (Local)
- ▶ DB (Legacy)



Result History

ExampleSet (Retrieve books Temp 53036)



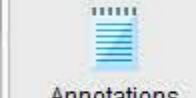
Data



Statistics



Visualizations



Annotations

Name	Type	Missing	Statistics	Filter (23 / 23 attributes):	Search for Attributes
book_id	Integer	0	Min: 4 Max: 10000 Average: 5016.813		
goodreads_book_id	Integer	0	Min: 13 Max: 33288638 Average: 4573716.158		
best_book_id	Integer	0	Min: 13 Max: 35036409 Average: 4777767.167		
work_id	Integer	0	Min: 87 Max: 56399597 Average: 7917797.948		
books_count	Integer	0	Min: 1 Max: 3455 Average: 91.608		
isbn	Nominal	268	Least: 9993911550 (1) Most: 000100039X (1) Values: 000100039X (1), 000224618X (1), ...[5592 more]		
isbn13	Real	216	Min: 195170342 Max: 9790007672390 Average: 9771144111219.523		
authors	Nominal	0	Least: „Stephen King“ (1) Most: Stephen King (53) Values: Stephen King (53), Dean Koontz (37), ...[3669 more]		
original_publication_year	Real	18	Min: -1750 Max: 2017 Average: 1970.646		
original_title	Nominal	352	Least: „Selected Poems“ (1) Most: „Stephen King“ (7) Values: „Stephen King“ (7), Selected Poems (3), ...[5473 more]		
title	Nominal	60	Least: „Selected Poems“ (1) Most: „Stephen King“ (4) Values: Selected Poems (4), Stone Soup (3), ...[5766 more]		
language_code	Nominal	1107	Least: „vie“ (1) Most: „eng“ (3351) Values: eng (3351), en-US (1076), ...[18 more]		
average_rating	Real	319	Min: 2.470 Max: 4.820 Average: 3.952		
ratings_count	Integer	319	Min: 2716 Max: 3198671 Average: 52846.686		
work_ratings_count	Integer	319	Min: 5510 Max: 3340896 Average: 58507.281		
work_text_reviews_count	Integer	319	Min: 3 Max: 140739 Average: 2946.533		

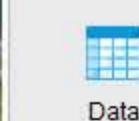
Repository

- [Import Data](#)
- ▶ [Training Resources \(connected\)](#)
- ▶ [Community Samples \(connected\)](#)
- ▶ [Samples](#)
- ▶ [Books Repository \(Local\)](#)
 - ▶ [Connections](#)
 - [Books \(6/2/24 4:18 PM – 2 kB\)](#)
 - [books Temp 53036 \(6/2/24 12:09 PM – 4.5 MB\)](#)
- ▶ [Local Repository \(Local\)](#)
- [DB \(Legacy\)](#)



Result History

ExampleSet (Retrieve books Temp 53036)



Data



Statistics



Visualizations



Annotations

Plot

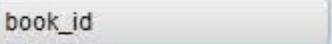
Plot 1

Plot type



Histogram

Value columns



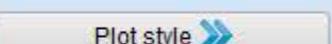
book_id

Color



-

Number of Bins



Number of bins

Plot style

Add new plot

General

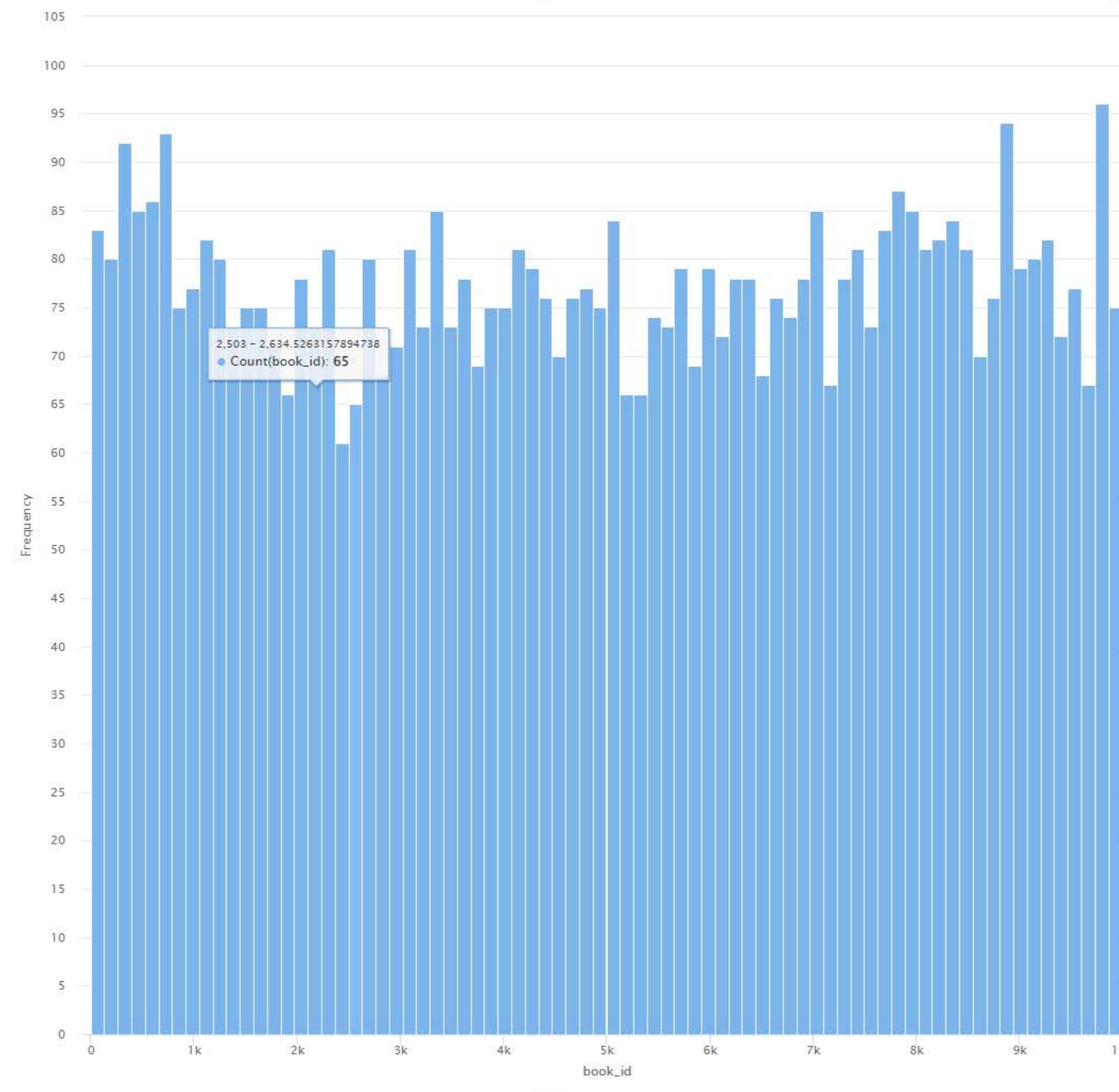
X-Axis

Y-Axis

Title

Legend

Tooltip



Repository

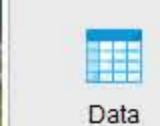
Import Data

- Training Resources (connected)
- Community Samples (connected)
- Samples
- Books Repository (Local)
 - Connections
 - Books (6/2/24 4:18 PM – 2 kB)
 - books Temp 53036 (6/2/24 12:09 PM – 4.5 MB)
 - Local Repository (Local)
 - DB (Legacy)



Result History

ExampleSet (Retrieve books Temp 53036)



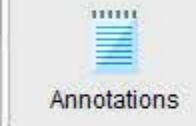
Data



Statistics



Visualizations



Annotations

Plot

Plot 1

Plot type: Scatter / Bubble

X-Axis column: authors

Value column: authors

Color: authors

Size: -

Jitter:

Regression interpolation: None

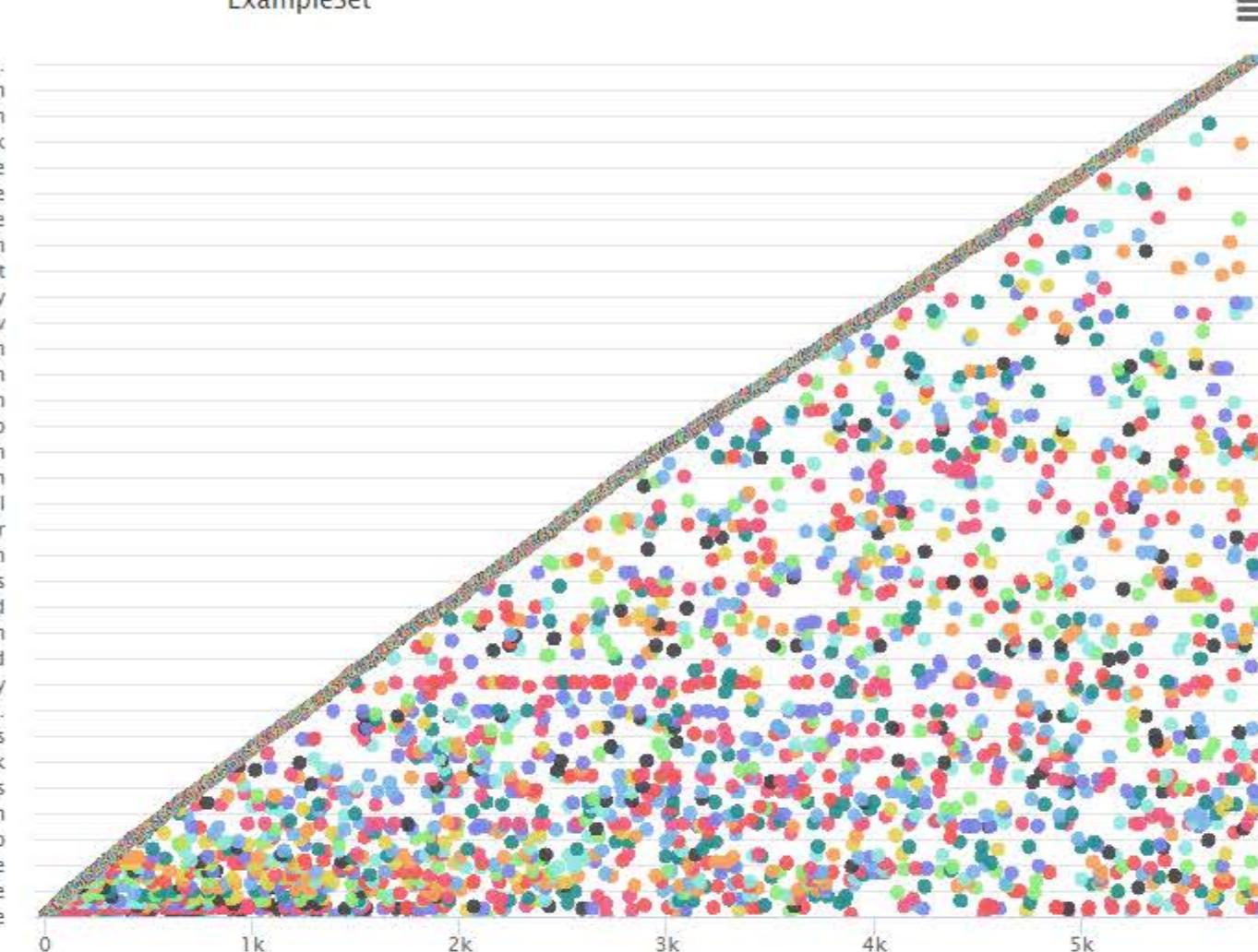
Plot style

[Add new plot](#)

authors

ExampleSet

Aleksandr Griboyedov, ÐÐ»ÐµÐ°ÑÐ°Ð½Ð°Ñ Ð¡ÐµÑÐ°Ð...
 Thomas Merton, Robert Giroux, William H. Shannon
 Margret Rey, H.A. Rey, Martha Weston
 Cat Patrick
 Jim Krueger, Alex Ross, Doug Braithwaite
 Isabel Allende, Oliver Brock, Frank Wynne
 Mary Westmacott, Agatha Christie
 Enid Blyton
 Pablo Neruda, Stephen Tapscott
 Liz Murray
 Rachel Maddow
 Emily Dickinson
 Adelle Waldman
 Neil Shubin
 Malinda Lo
 Katherine Hannigan
 Adeline Yen Mah
 Susan Crandall
 Roberto BolÃ±o, Natasha Wimmer
 T.S. Eliot, Michael North
 Brennan Manning, Michael W. Smith, Rich Mullins
 Roland Barthes, Richard Howard
 Ã...sne Seierstad, Ingrid Christpherson
 Audrey Wood, Don Wood
 Ovid, David Raeburn, Denis Feeney
 Roberto Aguirre-Sacasa, Mike Perkins, Laura Martin, St...
 Sebastian Faulks
 Chaim Potok
 Timothy Ferriss
 Helen Simonson
 JosÃ© Saramago, Giovanni Pontiero
 Oscar Wilde
 Agatha Christie
 Harper Lee



- General**
- X-Axis**
- Y-Axis**
- Title**
- Legend**
- Tooltip**

- Harper Lee
- J.R.R. Tolkien
- Khaled Hosseini
- Anne Frank, Eleanor Roosevelt,...
- William Shakespeare, Robert ...
- John Steinbeck
- Audrey Niffenegger
- Yann Martel
- Ray Bradbury
- Sue Monk Kidd
- Mark Haddon
- Jodi Picoult
- Stephen Chbosky
- Jane Austen, Tony Tanner, Ros ...
- Jeannette Walls
- John Grisham
- S.E. Hinton
- Oscar Wilde, Jeffrey Eugenides
- David Sedaris
- Cormac McCarthy
- Victor Hugo, Lee Fahnestock, N...
- Mitch Albom, Saulius Dagys
- Amy Tan
- Emma Donoghue
- Malcolm Gladwell
- Ernest Hemingway
- Nathaniel Hawthorne, Thomas E....
- Laura Hillenbrand

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- F. Scott Fitzgerald
- J.D. Salinger
- George Orwell, Erich Fromm, Ce...
- Alice Sebold
- Gillian Flynn
- Arthur Golden
- Elizabeth Gilbert
- Sara Gruen
- Shel Silverstein
- Mark Twain, John Seelye, Guy C...
- Paula Hawkins
- Kurt Vonnegut Jr.
- Mary Wollstonecraft Shelley, P...
- Homer, Robert Fagles, E.V. Rie...
- Jon Krakauer
- Elie Wiesel, Marion Wiesel
- Frances Hodgson Burnett
- Bram Stoker, Nina Auerbach, Da...
- Maurice Sendak
- Tina Fey
- Kim Edwards
- Jeffrey Eugenides
- Margaret Atwood
- William Shakespeare, Richard A...
- Walter Isaacson
- Mitch Albom
- Andy Weir
- Dan Brown
- John Green
- Jane Austen
- George Orwell
- William Golding
- Kathryn Stockett
- Paulo Coelho, Alan R. Clarke
- Charlotte BrontÃ«, Michael Mason
- Markus Zusak
- Aldous Huxley
- E.B. White, Garth Williams, Ro...
- Emily BrontÃ«, Richard J. Dunn
- Margaret Mitchell
- Stephen King
- Antoine de Saint-ExupÃ©ry, Ric...
- Charles Dickens, Richard Maxwe...
- William Goldman
- Gabriel GarcÃ¡a MÃ¡rquez, Greg...
- Barbara Kingsolver
- Alexandre Dumas, Robin Buss
- Nicholas Sparks
- Joseph Heller
- Mark Twain, Guy Cardwell, John...
- Vladimir Nabokov, Craig Raine
- Frank Herbert
- Ken Kesey
- Rebecca Wells
- Anthony Doerr
- Donna Tartt
- Autumn Johnson

Repository

- Import Data**
- Training Resources (connected)
 - Community Samples (connected)
 - Samples
 - Books Repository (Local)
 - Connections
 - Books (6/2/24 4:18 PM – 2 kB)
 - books Temp 53036 (6/2/24 12:09 PM – 4.5 MB)
 - Local Repository (Local)
 - DB (Legacy)



Result History

ExampleSet (Retrieve books Temp 53036)

Data

Plot

Plot 1

Plot type: Scatter / Bubble

X-Axis column: -

Value column: average_rating

Color: authors

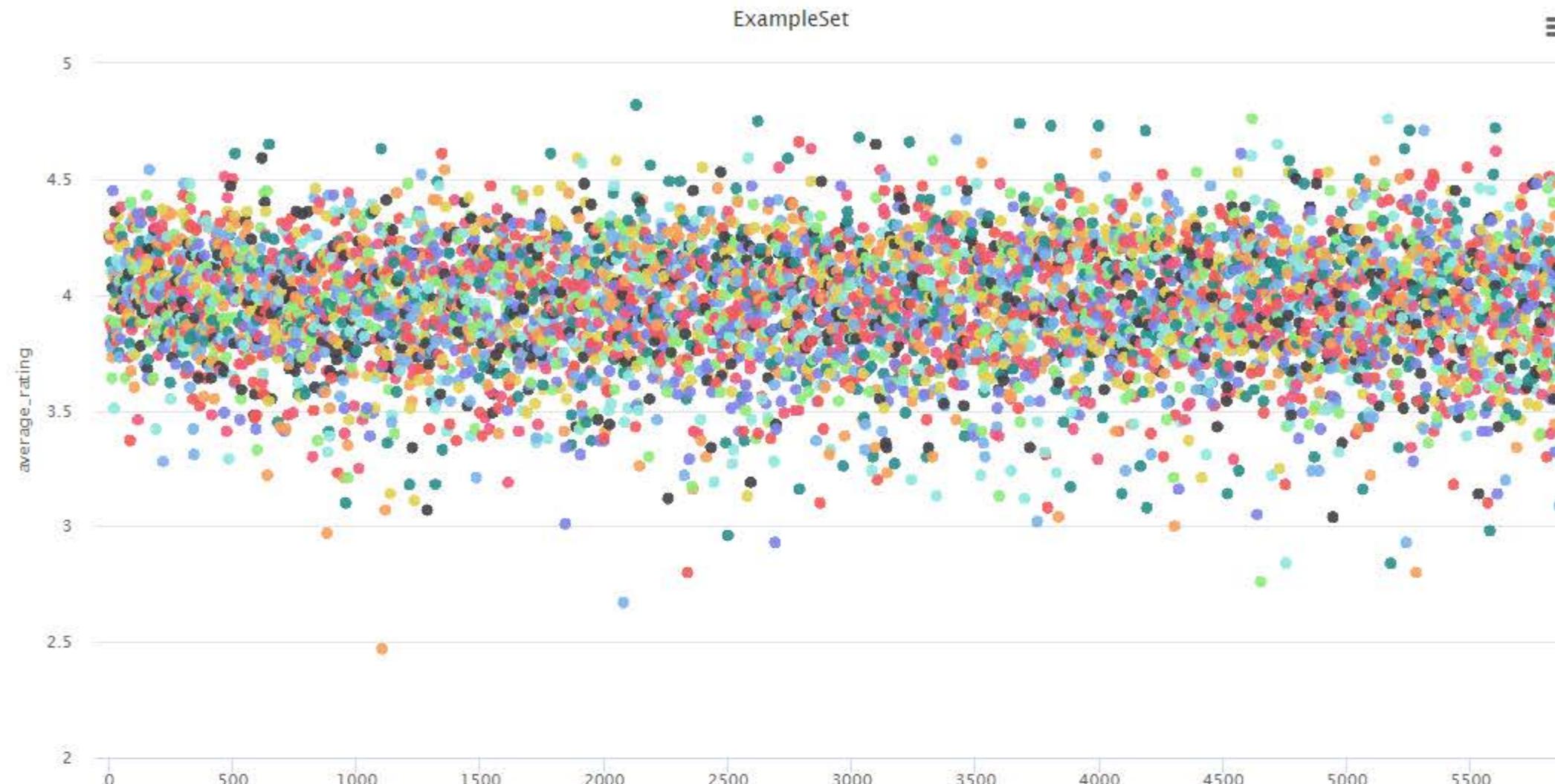
Size: -

Jitter:

Regression interpolation: None

Plot style

[Add new plot](#)



Statistics

Visualizations

Annotations

- General**
- X-Axis**
- Y-Axis**
- Title**
- Legend**
- Tooltip**
- Harper Lee
 - J.R.R. Tolkien
 - Khaled Hosseini
 - Anne Frank, Eleanor Roosevelt, ...
 - William Shakespeare, Robert ...
 - John Steinbeck
 - Audrey Niffenegger
 - Yann Martel
 - Ray Bradbury
 - Sue Monk Kidd
 - Mark Haddon
 - Jodi Picoult
 - Stephen Chbosky
 - Jane Austen, Tony Tanner, Ros ...
 - Jeannette Walls
 - John Grisham
 - S.E. Hinton
 - Oscar Wilde, Jeffrey Eugenides
 - David Sedaris
 - Cormac McCarthy
 - Victor Hugo, Lee Fahnestock, N...
 - Mitch Albom, Saulius Dagys
 - Amy Tan
 - Emma Donoghue
 - Malcolm Gladwell
 - Ernest Hemingway
 - Nathaniel Hawthorne, Thomas E...
 - Laura Hillenbrand
 - F. Scott Fitzgerald
 - J.D. Salinger
 - George Orwell, Erich Fromm, Ce...
 - Alice Sebold
 - Gillian Flynn
 - Arthur Golden
 - Elizabeth Gilbert
 - Sara Gruen
 - Shel Silverstein
 - Mark Twain, John Seelye, Guy C...
 - Paula Hawkins
 - Kurt Vonnegut Jr.
 - Mary Wollstonecraft Shelley, P...
 - Homer, Robert Fagles, E.V. Rie...
 - Jon Krakauer
 - Elie Wiesel, Marion Wiesel
 - Frances Hodgson Burnett
 - Bram Stoker, Nina Auerbach, Da...
 - Maurice Sendak
 - Tina Fey
 - Kim Edwards
 - Jeffrey Eugenides
 - Margaret Atwood
 - William Shakespeare, Richard A...
 - Walter Isaacson
 - Mitch Albom
 - Andy Weir
 - Dan Brown
 - John Green
 - Jane Austen
 - George Orwell
 - William Golding
 - Kathryn Stockett
 - Paulo Coelho, Alan R. Clarke
 - Charlotte Brontë, Michael Mason
 - Markus Zusak
 - Aldous Huxley
 - E.B. White, Garth Williams, Ro...
 - Emily Brontë, Richard J. Dunn
 - Margaret Mitchell
 - Stephen King
 - Antoine de Saint-Exupéry, Ric...
 - Charles Dickens, Richard Maxwe...
 - William Goldman
 - Gabriel García Márquez, Greg...
 - Barbara Kingsolver
 - Alexandre Dumas, Robin Buss
 - Nicholas Sparks
 - Joseph Heller
 - Mark Twain, Guy Cardwell, John...
 - Vladimir Nabokov, Craig Raine
 - Frank Herbert
 - Ken Kesey
 - Rebecca Wells
 - Anthony Doerr
 - Donna Tartt
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Repository

Import Data

Training Resources (connected)

Community Samples (connected)

Samples

Books Repository (Local)

Connections

- Books (6/2/24 4:18 PM – 2 kB)
- books Temp 53036 (6/2/24 12:09 PM – 4.5 MB)

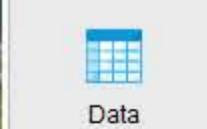
Local Repository (Local)

DB (Legacy)



Result History

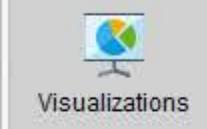
ExampleSet (Retrieve books Temp 53036)



Data



Statistics



Visualizations



Annotations

Plot

Plot 1

Plot type



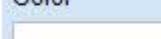
Histogram



Value columns

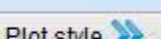
average_rating

Color



Number of Bins

Number of bins



Add new plot

General

X-Axis

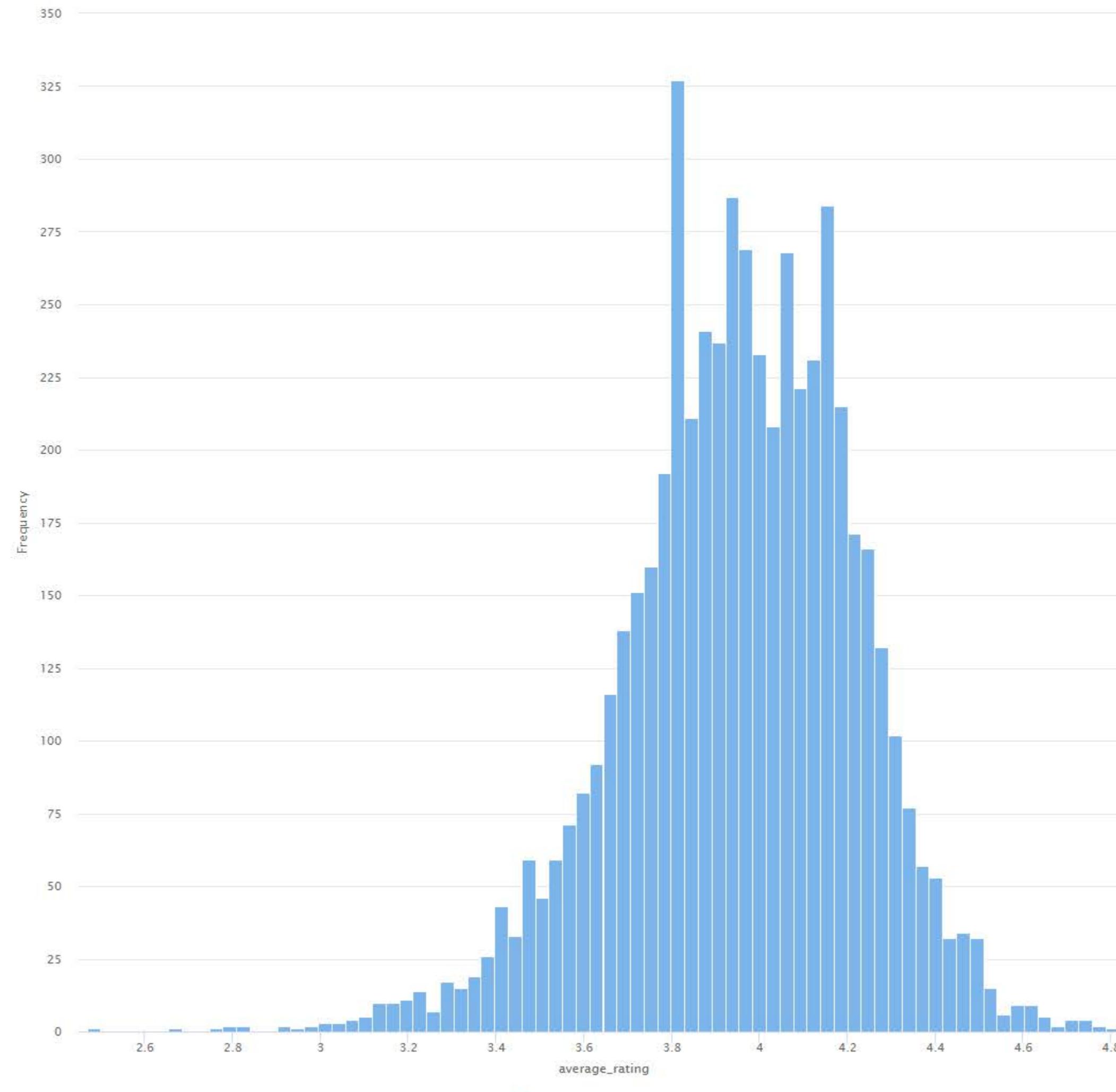
Y-Axis

Title

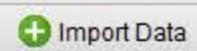
Legend

Tooltip

ExampleSet



Repository



- ▶ Training Resources (connected)
- ▶ Community Samples (connected)
- ▶ Samples
- ▶ Books Repository (Local)
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 - ▶ books Temp 53036 (6/2/24 12:09 PM – 4.5 MB)
- ▶ Local Repository (Local)
- ▶ DB (Legacy)

<new process*> – RapidMiner Studio Educational 10.3.001 @ MANAGERONE

File Edit Process View Connections Settings Extensions Help

Views: Design Results Turbo Prep Auto Model Interactive Analysis

Find data, operators...etc All Studio

Repository

- + Import Data
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- Local Repository (Local)
- DB (Legacy)

Process

Process

Process

inp res res

Retrieve books Tem... Filter Examples

```
graph LR; A[Retrieve books Tem...] --> B[Filter Examples]; B -- out --> C[ ]; C -- ori --> D[ ]; C -- unm --> E[ ]; C -- exa --> F[ ]; C -- exa --> G[ ];
```

Parameters

Filter Examples

condition class: no_missing_attributes

invert filter

Hide advanced parameters

Change compatibility (10.3.001)

Operators

Search for Operators

- Data Access (68)
- Blending (81)
- Attributes (47)
- Examples (11)
 - Filter (2)
 - Filter Examples
 - Filter Example Range
 - Sampling (6)
 - Sort (3)
 - Table (12)
 - Values (11)
- Cleansing (28)
- Modeling (167)
- Scoring (13)
- Validation (30)
- Utility (85)
- Extensions (53)

Get more operators from the Marketplace

Help

Filter Examples

RapidMiner Studio Core

Tags: Select, Keep, Remove, Drop, Delete, Rows, Cases, Instances, Lines, Observations, Filter Missing, Filter

Synopsis

This Operator selects which Examples of an ExampleSet are kept and which Examples are removed.

Jump to Tutorial Process

Description

The Operator returns those Examples that match the given condition. The conditions are defined by the user. Several pre-defined conditions also exist as advanced options.

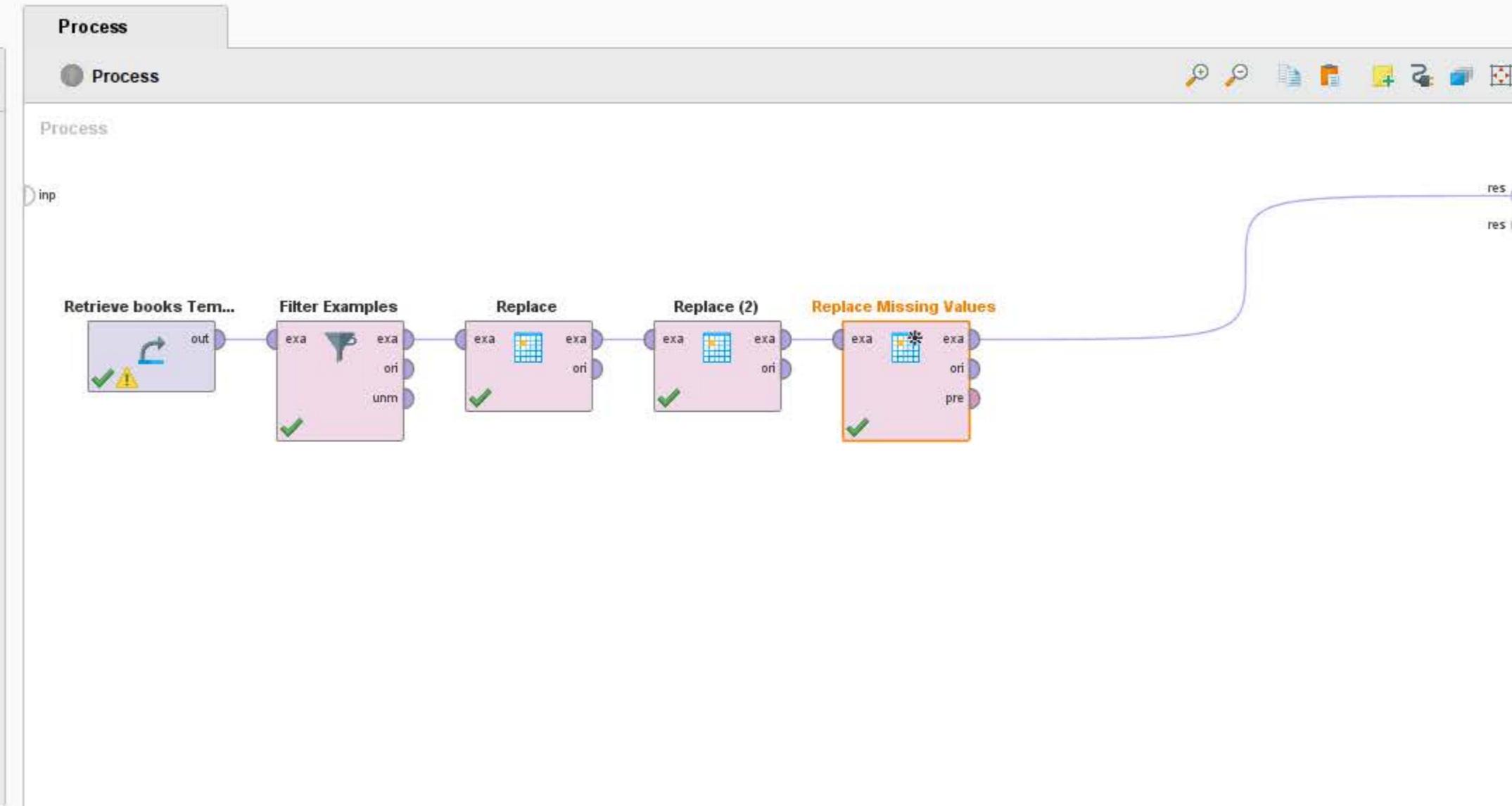
Leverage the Wisdom of Crowds to get operator recommendations based on your process design!

Activate Wisdom of Crowds



Repository

- + Import Data
- Training Resources (connected)
- Community Samples (connected)
- Samples
- Books Repository (Local)
 - Connections
 - Books (6/24 4:18 PM - 2 kB)
 - books Temp 53036 (6/24 12:08 PM - 4.5 MB)
 - Books_mongoDB (6/24 5:03 PM - 5 kB)
- Local Repository (Local)
- DB (Legacy)



Parameters

* Replace Missing Values

attribute filter type: all

invert selection

include special attributes

default: average

columns: [Edit List \(0\)...](#)

Operators

Search for Operators

- Data Access (68)
- Blending (81)
- Cleansing (28)
 - Normalization (3)
 - Binning (5)
 - Missing (8)
 - * Replace Missing Values
 - * Impute Missing Values
 - * Declare Missing Value
 - * Replace Infinite Values
 - * Remove Unused Values
 - * Fill Data Gaps
 - * Replace All Missing
 - * Handle Unknown Values
- Duplicates (1)
- Outliers (4)
- Dimensionality Reduction (5)
 - Statistics
 - Quality Measures
- Get more operators from the Marketplace

Help

* Replace Missing Values

RapidMiner Studio Core

Tags: Nulls, Empty, Cleansing, Quality, Missing, Handle, Impute, Na, Nan, NaN, Fill na, Missing

Synopsis

This Operator replaces missing values in Examples of selected Attributes by a specified replacement.

[Jump to Tutorial Process](#)

Description

Missing values can be replaced by the minimum, maximum or average value of that Attribute. Zero can also be used to replace missing values. Any replenishment value can also be specified as a replacement of missing values.



Result History

ExampleSet (Replace Missing Values)

Row No.	isbn	authors ↑	original_title	title	language_c...	image_url	small_imag...	book_id	goodreads_...	best_book_id	work_id	books_co...
1081	743291476	AJJacobs	TheYearofLivi...	TheYearofLivi...	enUS	httpsimages...	httpsimages...	2044	495395	495395	2325789	43
2255	743250621	AJJacobs	TheKnowItAll...	TheKnowItAll...	eng	httpsgrasse...	httpsgrasse...	4836	28116	28116	197064	32
1723	1579731813	ALoSingerWalt...	SleepingBea...	SleepingBea...	eng	httpsgrasse...	httpsgrasse...	3575	1728744	1728744	1726198	1
3496	670025488	AMHomes	MayWeBeFor...	MayWeBeFor...	enCA	httpsimages...	httpsimages...	7944	16061734	16061734	19176680	30
2012	60897848	AManetteAnsay	VinegarHillPS	VinegarHill	enUS	httpsgrasse...	httpsgrasse...	4265	101911	101911	99634	33
3561	452156610	ANRoquelaure...	SleepingBea...	SleepingBea...	eng	httpsgrasse...	httpsgrasse...	8096	26581	26581	3470	11
1564	8173711461	APJAbdulKal...	WingsofFireA...	WingsofFireA...	enUS	httpsimages...	httpsimages...	3225	634583	634583	620871	21
742	143123238	ASAHarrison	TheSilentWife	TheSilentWife	eng	httpsimages...	httpsimages...	1306	16171291	16171291	22018742	65
1044	679735909	ASByatt	Possession	Possession	eng	httpsimages...	httpsimages...	1970	41219	41219	2246190	114
4094	307272095	ASByatt	TheChildrens...	TheChildrens...	eng	httpsimages...	httpsimages...	9506	6280379	6280379	5768221	49
2450	375865861	ASKing	Pleaseignore...	Pleaseignore...	eng	httpsimages...	httpsimages...	5320	6665671	6665671	6860540	26
3082	316194689	ASKing	AskthePasse...	AskthePasse...	enUS	httpsimages...	httpsimages...	6925	13069935	13069935	18236079	13
3065	60684127	AWTozer	TheKnowled...	TheKnowled...	eng	httpsimages...	httpsimages...	6886	666758	666758	1313	45
4261	1442486597	AbigailHaasA...	DangerousGi...	DangerousGi...	eng	httpsimages...	httpsimages...	9942	16074758	16074758	21869436	18
166	375414495	AbrahamVerg...	CuttingforSto...	CuttingforSto...	eng	httpsimages...	httpsimages...	291	3591262	3591262	3633533	74
3647	375758232	AdamGopnik	ParistotheMo...	ParistotheMo...	eng	httpsgrasse...	httpsgrasse...	8329	7062	7062	2297476	22
1838	618001905	AdamHochsc...	KingLeopold...	KingLeopold...	enUS	httpsimages...	httpsimages...	3844	347610	347610	937922	38
819	812992792	AdamJohnson	TheOrphanM...	TheOrphanM...	eng	httpsimages...	httpsimages...	1462	11529868	11529868	16467838	55
4262	670026557	AdamMGrant	GiveandTake...	GiveandTake...	eng	httpsimages...	httpsimages...	9944	16158498	16158498	21998914	26
3475	425252868	AdamMakosL...	AHigherCallA...	AHigherCallA...	eng	httpsimages...	httpsimages...	7902	15808816	15808816	22171084	17
759	1617750255	AdamMansb...	GotheFuckto...	GotheFuckto...	eng	httpsimages...	httpsimages...	1331	11192642	11192642	16117490	51
2190	553585975	AdamSmith	AnInquiryintot...	TheWealthof...	eng	httpsgrasse...	httpsgrasse...	4684	25698	25698	1373762	513
3199	380811960	AdeleFaberEl...	HowtoTalkSo...	HowtoTalkSo...	enUS	httpsgrasse...	httpsgrasse...	7233	769016	769016	2738870	61
2228	767903579	AdelineYenM...	FallingLeave...	FallingLeave...	eng	httpsimages...	httpsimages...	4759	54529	54529	1429862	49
2371	440228654	AdelineYenM...	ChineseCind...	ChineseCind...	enUS	httpsgrasse...	httpsgrasse...	5108	82751	82751	1429851	29
2767	805097457	AdelleWaldm...	TheLoveAffair...	TheLoveAffair...	enCA	httpsimages...	httpsimages...	6114	16045140	16045140	21823357	34
2075	395083621	AdolfHitler	MeinKampf	MeinKampf	enUS	httpsimages...	httpsimages...	4399	54270	54270	2049624	573
4172	1590170571	AdolfoBjolyCa...	Lainvencinde...	TheInvention...	eng	httpsimages...	httpsimages...	9720	94486	94486	2302985	86
1589	517203383	AdrianConan...	TheExploitsof...	TheExploitsof...	eng	httpsgrasse...	httpsgrasse...	3292	76104	76104	73626	17
3793	743254430	AdrianNicole...	RandomFam...	RandomFam...	enUS	httpsgrasse...	httpsgrasse...	8703	385255	385255	909535	13
888	61257095	AdrianaTrigiani	TheShoemak...	TheShoemak...	eng	httpsimages...	httpsimages...	1610	13127599	13127599	15184744	41
3368	345472446	AdrianaTrigiani	LuciaLucia	LuciaLucia	eng	httpsgrasse...	httpsgrasse...	7652	60057	60057	1319726	33
3548	61257052	AdrianaTrigiani	VeryValentine	VeryValentine	enUS	httpsgrasse...	httpsgrasse...	8073	3673357	3673357	3716647	39

ExampleSet (4,282 examples, 0 special attributes, 23 regular attributes)

Repository

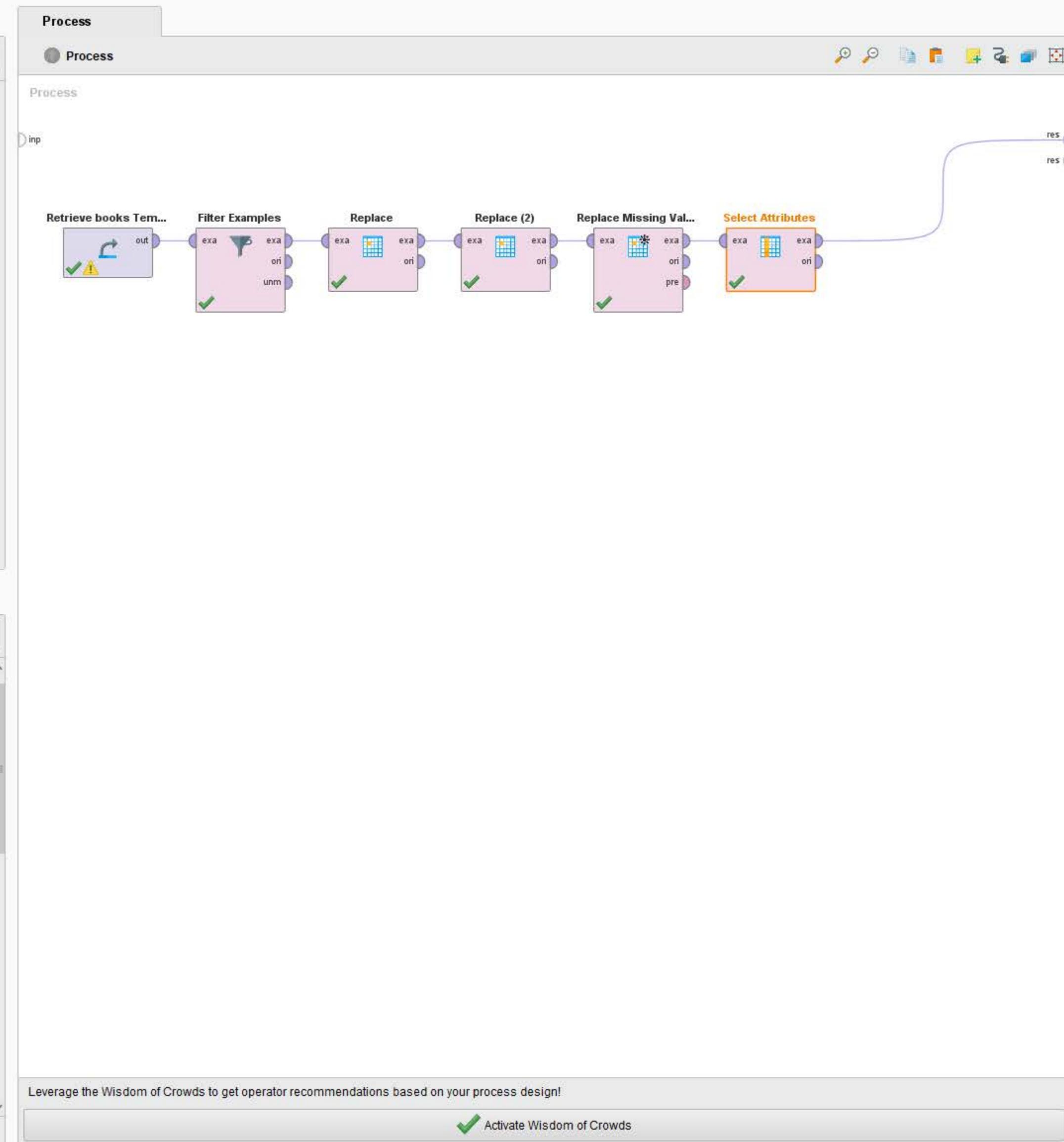
Import Data

- Training Resources (connected)
- Community Samples (connected)
- Samples
- Books Repository (Local)
 - Connections
 - Books (6/2/24 4:18 PM – 2 kB)
 - books Temp 53036 (6/2/24 12:09 PM – 4.5 MB)
 - Books_mongoDB (6/2/24 5:03 PM – 5 kB)
- Local Repository (Local)
- DB (Legacy)



Repository

- + Import Data
- Training Resources (connected)
- Community Samples (connected)
- Samples
- Books Repository (Local)
 - Books (6/24 4:18 PM – 2 kB)
 - books Temp 53036 (6/24 12:08 PM – 4.6 MB)
 - Books_mongoDB (6/24 5:03 PM – 5 kB)
- Local Repository (Local)
- DB (Legacy)



Parameters

Select Attributes

type: include attributes

attribute filter type: a subset

select subset: [Select Attributes...](#)

also apply to special attributes (id, label..)

Help

Select Attributes

Blending

Tags: [Filter](#), [Keep](#), [Remove](#), [Drop](#), [Delete](#), [Columns](#), [Variables](#), [Features](#), [Feature Set](#), [Selection](#)

Synopsis

This Operator selects a subset of Attributes of an ExampleSet and removes the other Attributes.

[Jump to Tutorial Process](#)

Description

The Operator provides different filter types to make Attribute selection easy. Possibilities are for example: Direct selection of Attributes. Selection by a regular expression or selecting only Attributes without missing values. See parameter **attribute filter type** for a detailed description of the different filter types.

Operators

Search for Operators

- Blending (81)
 - Attributes (47)
 - Names & Roles (5)
 - Types (18)
 - Selection (7)
 - Select Attributes
 - Select by Weights
 - Select by Random
 - Remove Attribute Range
 - Remove Useless Attributes
 - Remove Correlated Attributes
 - Work on Subset
 - Generation (16)
 - Reorder Attributes
 - Examples (11)
 - Table (12)
 - Values (11)
 - Cleansing (28)
 - Modeling (167)

[Get more operators from the Marketplace](#)

Activate Wisdom of Crowds

Leverage the Wisdom of Crowds to get operator recommendations based on your process design!



Result History

ExampleSet (Select Attributes)

Open in Turbo Prep Auto Model Interactive Analysis

Filter (4,282 / 4,282 examples): all

Row No.	authors	title	book_id	books_count	average_rat...	ratings_count
1	HarperLee	ToKillaMocki...	4	487	4.250	3198671
2	FScottFitzger...	TheGreatGat...	5	1356	3.890	2683664
3	JohnGreen	TheFaultinOu...	6	226	4.260	2346404
4	JRR Tolkien	TheHobbit	7	969	4.250	2071616
5	JDSalinger	TheCatcherin...	8	360	3.790	2044241
6	JaneAusten	PrideandPrej...	10	3455	4.240	2035490
7	KhaledHoss...	TheKiteRunner	11	283	4.260	1813044
8	GeorgeOrwel...	1984	13	995	4.140	1956832
9	GeorgeOrwell	AnimalFarm	14	896	3.870	1881700
10	AnneFrankEl...	TheDiaryofaY...	15	710	4.100	1972666
11	AliceSebold	TheLovelyBo...	22	183	3.770	1605173
12	WilliamGolding	LordoftheFlies	28	458	3.640	1605019
13	WilliamShak...	RomeoandJu...	29	1937	3.730	1628519
14	GillianFlynn	GoneGirl	30	196	4.030	512475
15	KathrynStockett	TheHelp	31	183	4.450	1531753
16	JohnSteinbeck	OfMiceandMen	32	373	3.840	1467496
17	ArthurGolden	MemoirsofaG...	33	220	4.080	1300209
18	PauloCoelho...	TheAlchemist	35	458	3.820	1299566
19	AudreyNiffen...	TheTimeTrav...	38	167	3.950	746287
20	ElizabethGilb...	EatPrayLove	40	185	3.510	1181647
21	CharlotteBro...	JaneEyre	43	2568	4.100	1198557
22	SaraGruen	WaterforElep...	46	128	4.070	1068146
23	MarkusZusak	TheBookThief	47	251	4.360	1159741
24	RayBradbury	Fahrenheit451	48	507	3.970	570498
25	ShelSilverstein	WheretheSid...	50	45	4.290	1016888
26	AldousHuxley	BraveNewWo...	55	515	3.970	1022601
27	SueMonkKidd	TheSecretLif...	57	125	4.010	916189
28	MarkTwainJo...	TheAdventure...	58	2277	3.800	953758
29	EBWhiteGart...	CharlottesWeb	59	180	4.150	1064521
30	MarkHaddon	TheCuriousIn...	60	183	3.850	867553
31	PaulaHawkins	TheGirlonthe...	61	14	3.880	1008778
32	EmilyBrontRi...	WutheringHei...	63	2498	3.820	899195
33	JodiPicoult	MySistersKee...	64	125	4.060	863879

ExampleSet (4,282 examples, 0 special attributes, 6 regular attributes)

Repository

- Import Data
- ▶ Training Resources (connected)
- ▶ Community Samples (connected)
- ▶ Samples
- ▶ Books Repository (Local)
 - Connections
 - Books (6/2/24 4:18 PM – 2 kB)
 - books Temp 53036 (6/2/24 12:09 PM – 4.5 MB)
 - Books_mongoDB (6/2/24 5:03 PM – 5 kB)
- ▶ Local Repository (Local)
- DB (Legacy)



Result History

ExampleSet (Select Attributes)

Name	Type	Missing	Statistics			Filter (6 / 6 attributes): <input type="text" value="Search for Attributes"/>	
authors	Nominal	0	Least ricEmmanuelSchmitt (0)	Most StephenKing (47)	Values StephenKing (47), DeanKoontz (26), ...[3630 more]		
title	Nominal	0	Least number9dream (0)	Most SelectedPoems (11)	Values SelectedPoems (11), Arcadia (2), ...[5701 more]		
book_id	Integer	0	Min 4	Max 9999	Average 4689.310		
books_count	Integer	0	Min 1	Max 3455	Average 104.422		
average_rating	Real	0	Min 2.470	Max 4.820	Average 3.945		
ratings_count	Integer	0	Min 2773	Max 3198671	Average 60514.065		

Repository

Import Data
Training Resources (connected)
Community Samples (connected)
Samples
Books Repository (Local)
Connections
Books (6/2/24 4:18 PM – 2 kB)
books Temp 53036 (6/2/24 12:09 PM – 4.5 MB)
Books_mongoDB (6/2/24 5:03 PM – 5 kB)
Local Repository (Local)
DB (Legacy)



Result History

ExampleSet (Select Attributes)

Data

Statistics

Visualizations

Annotations

Plot

Plot 1

Plot type

Histogram

Value columns

books_count

Color

-

Number of Bins

Number of bins

Plot style

Add new plot

General

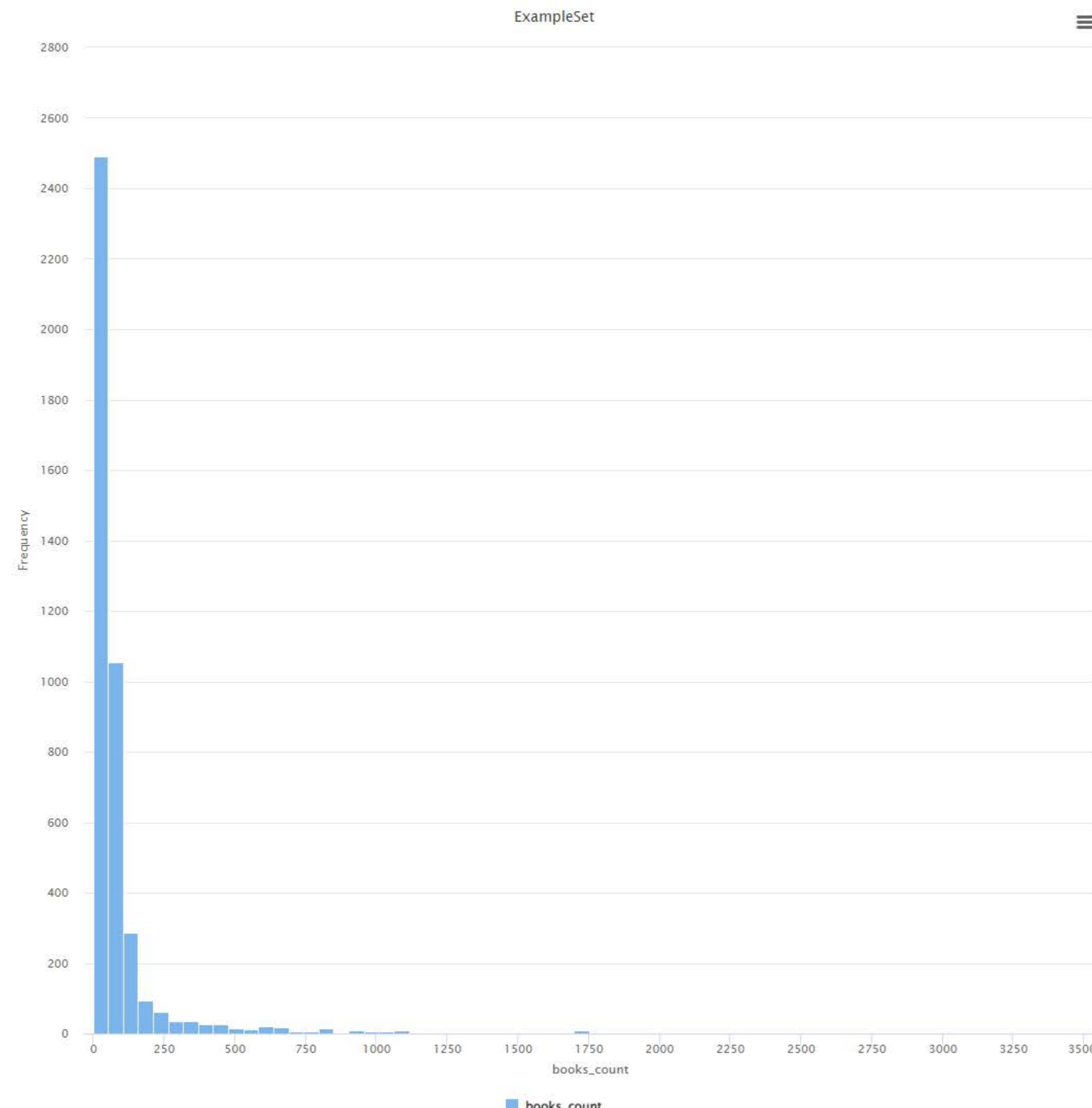
X-Axis

Y-Axis

Title

Legend

Tooltip



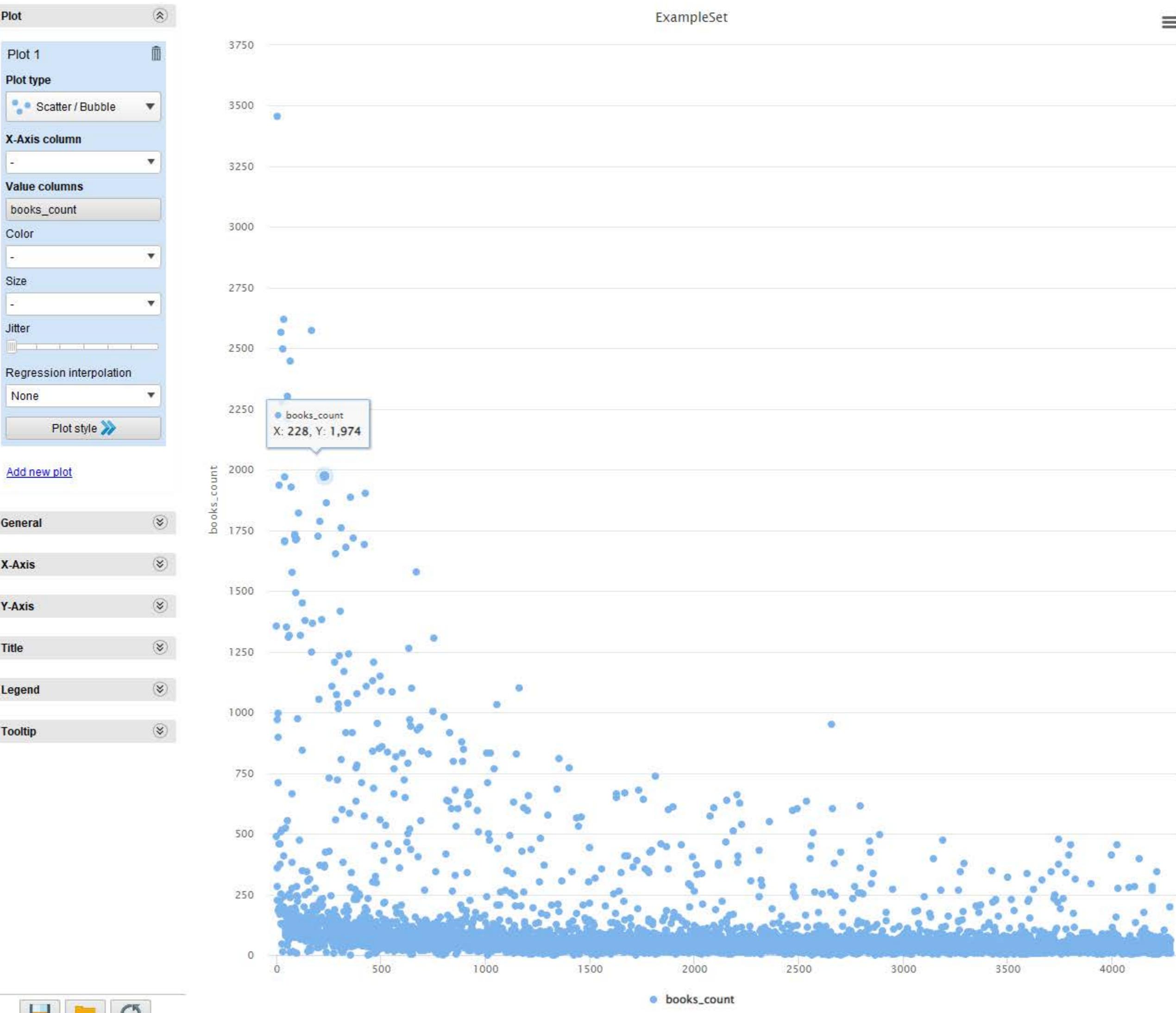
Repository

Import Data

- ▶ Training Resources (connected)
- ▶ Community Samples (connected)
- ▶ Samples
- ▶ Books Repository (Local)
 - ▶ Connections
 - Books (6/2/24 4:18 PM – 2 kB)
 - books Temp 53036 (6/2/24 12:09 PM – 4.5 MB)
 - Books_mongoDB (6/2/24 5:03 PM – 5 kB)
 - ▶ Local Repository (Local)
 - ▶ DB (Legacy)

Result History

ExampleSet (Select Attributes)



Repository

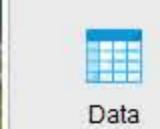
 Import Data

- ▶ Training Resources (connected)
 - ▶ Community Samples (connected)
 - ▶ Samples
 - ▶ Books Repository (Local)
 - ▼ Connections
 - Books (6/2/24 4:18 PM – 2 kB)
 - books Temp 53036 (6/2/24 12:09 PM – 4.5 MB)
 - Books_mongoDB (6/2/24 5:03 PM – 5 kB)
 - ▶ Local Repository (Local)
 - DB (Legacy)



Result History

ExampleSet (Select Attributes) X



Data



Statistics



Visualizations



Annotations

Plot

Plot 1

Plot type: Scatter / Bubble

X-Axis column: -

Value column: ratings_count

Color: authors

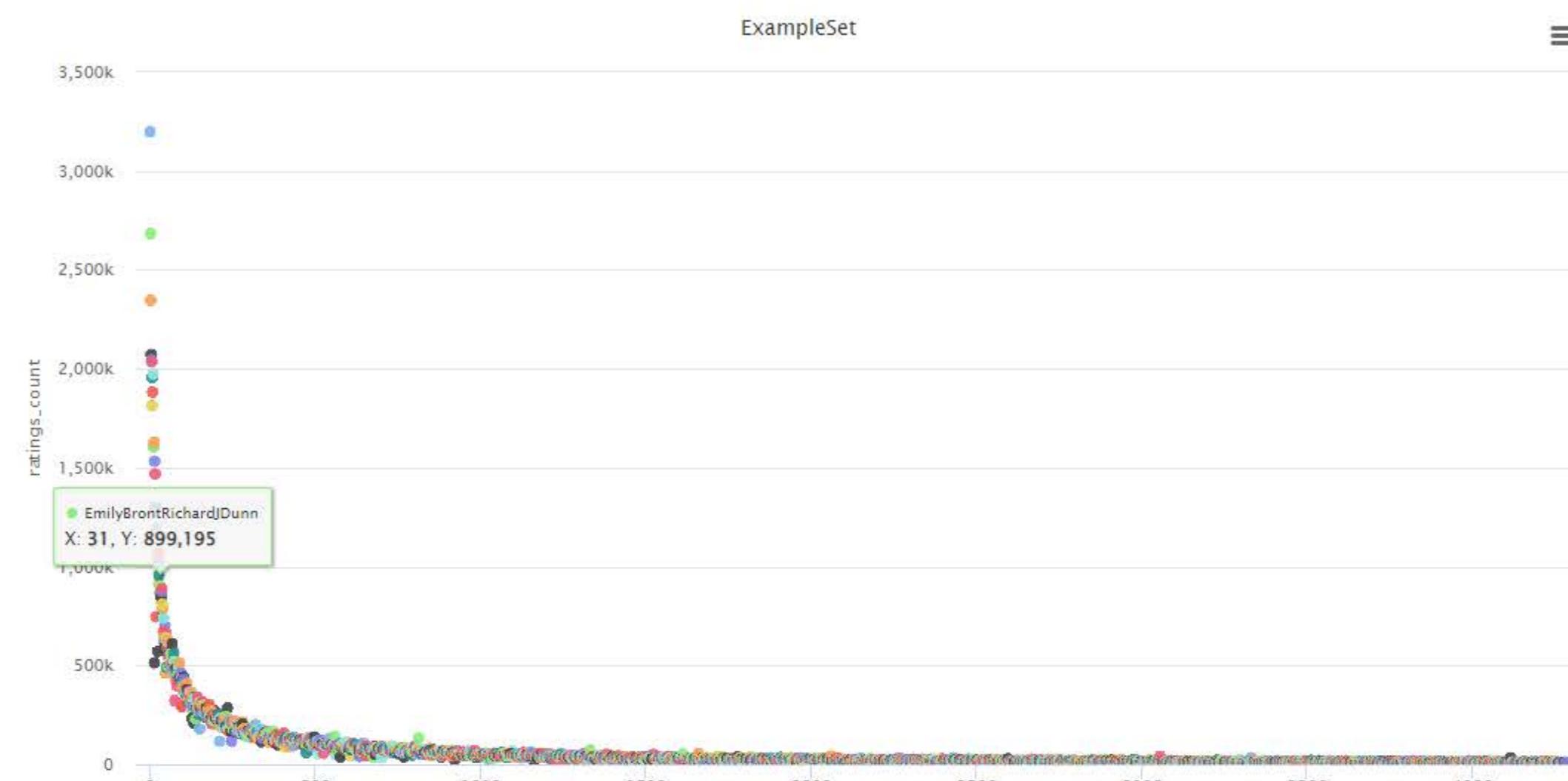
Size: -

Jitter:

Regression interpolation: None

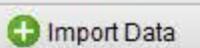
Plot style

[Add new plot](#)



- General**
- HarperLee
 - JRRTolkien
 - KhaledHosseini
 - AnneFrankEleanorRooseveltBMMoor...
 - WilliamShakespeareRobertJackson
 - JohnSteinbeck
 - AudreyNiffenegger
 - SaraGruen
 - ShelSilverstein
 - MarkTwainJohnSeelyeGuyCardwell
 - PaulaHawkins
 - KurtVonnegutJr
 - MaryWollstonecraftShelleyPercy...
 - AntoinedeSaintExupryRichardHow...
 - CharlesDickensRichardMaxwellHa...
 - SEHinton
 - OscarWildeJeffreyEugenides
 - DavidSedaris
 - CormacMcCarthy
 - KimEdwards
 - JeffreyEugenides
 - MargaretAtwood
 - MalcolmGladwell
 - ErnestHemingway
 - AndyWeir
 - DonnaTartt
 - AnitaDiamant
 - CharlesDickens
 - FScottFitzgerald
 - JDSalinger
 - GeorgeOrwellErichFrommCellster
 - AliceSebold
 - GillianFlynn
 - ArthurGolden
 - ElizabethGilbert
 - MarkusZusak
 - AldousHuxley
 - EBWhiteGarthWilliamsRosemaryWells
 - EmilyBrontRichardJDunn
 - MargaretMitchell
 - JaneAustenTonyTannerRosBallaster
 - JeannetteWalls
 - JohnGrisham
 - FrancesHodgsonBurnett
 - BramStokerNinaAuerbachDavidJSkal
 - MauriceSendak
 - NicholasSparks
 - JosephHeller
 - MarkTwainGuyCardwellJohnSeelye
 - EmmaDonoghue
 - WalterIsaacson
 - RebeccaWells
 - LauraHillenbrand
 - JayAsher
 - WilliamShakespeare
 - RainbowRowell
 - StephenKingBernieWrightson
 - KenKesey
 - NathanielHawthorneThomasEConno...
 - DanBrown
 - TracyChevalier
 - DrSeuss
 - StephenKingBernieWrightson

Repository X



- Training Resources** (connected)
- Community Samples** (connected)
- Samples**
- Books Repository (Local)**
- Connections**
- Books (6/2/24 4:18 PM – 2 kB)
 - books Temp 53036 (6/2/24 12:09 PM – 4.5 MB)
 - Books_mongoDB (6/2/24 5:03 PM – 5 kB)
- Local Repository (Local)**
- DB (Legacy)**



Result History

ExampleSet (Select Attributes)

Data

Plot

Plot 1

Plot type: Scatter / Bubble

X-Axis column: -

Value column: average_rating

Color: authors

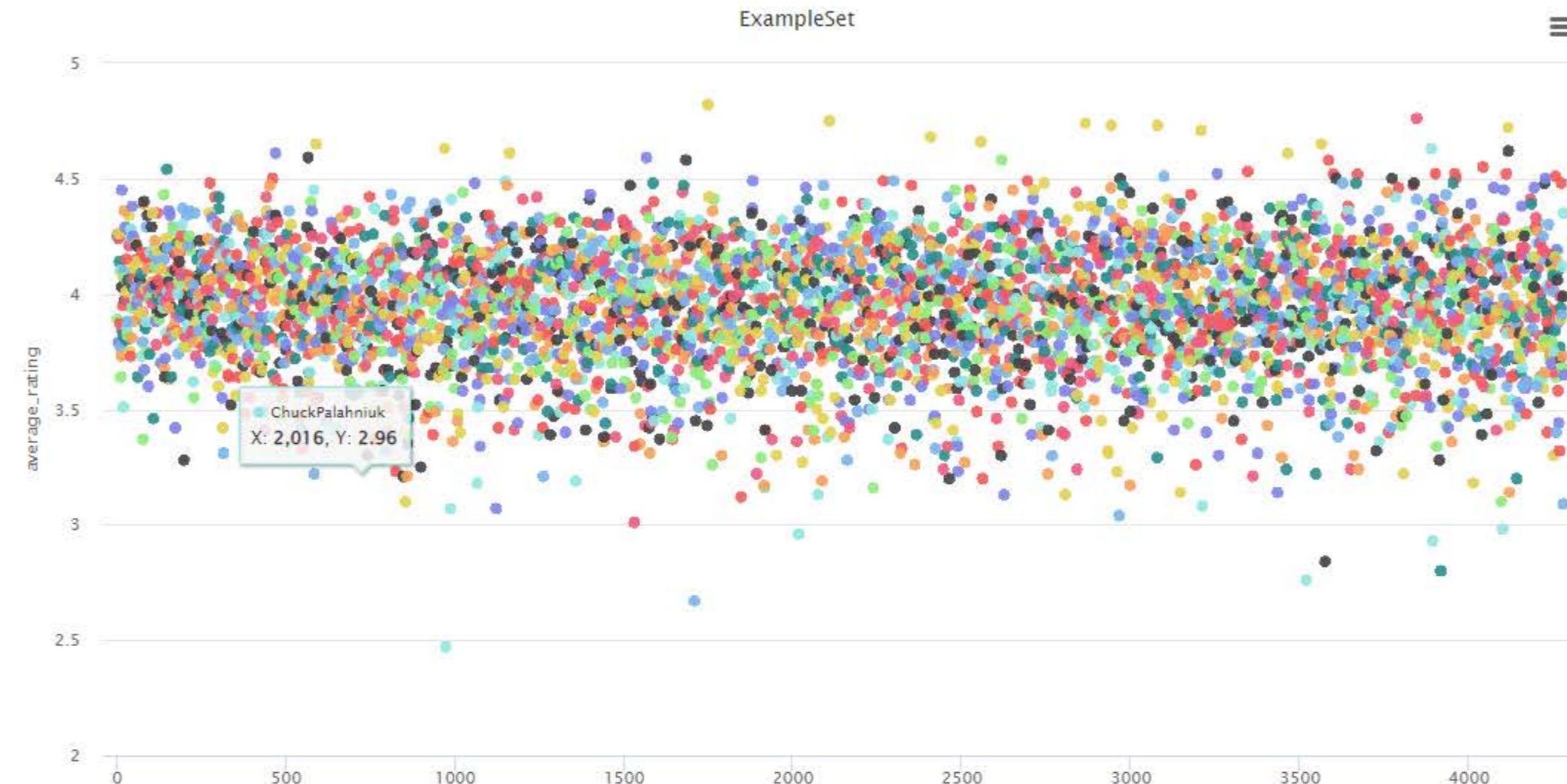
Size: -

Jitter:

Regression interpolation: None

Plot style

[Add new plot](#)



HarperLee
JRR Tolkien
KhaledHosseini
AnneFrank EleanorRooseveltBMMoor...
WilliamShakespeare RobertJackson
JohnSteinbeck
AudreyNiffenegger
SaraGruen
ShelSilverstein
MarkTwain JohnSeelye GuyCardwell
PaulaHawkins
KurtVonnegutJr
MaryWollstonecraftShelley Percy...
AntoinedeSaintExupry RichardHow...
CharlesDickens RichardMaxwellHa...
SEHinton
OscarWilde JeffreyEugenides
DavidSedaris
Cormac McCarthy
KimEdwards
JeffreyEugenides
MargaretAtwood
MalcolmGladwell
ErnestHemingway
AndyWeir
DonnaTartt
AnitaDiamant
CharlesDickens
FScott Fitzgerald
JDSalinger
GeorgeOrwell ErichFromm Cellster
AliceSebold
GillianFlynn
ArthurGolden
ElizabethGilbert
Markus Zusak
AldousHuxley
EWBWhite GarthWilliams RosemaryWells
EmilyBrent RichardJ Dunn
MargaretMitchell
JaneAusten TonyTanner RosBallaster
JeannetteWalls
JohnGrisham
FrancesHodgson Burnett
BramStoker NinaAuerbach DavidJSkal
MauriceSendak
NicholasSparks
JosephHeller
MarkTwain GuyCardwell JohnSeelye
EmmaDonoghue
WalterIsaacson
RebeccaWells
LauraHillenbrand
JayAsher
WilliamShakespeare
RainbowRowell
StephenKing Bernie Wrightson
JohnGreen
JaneAusten
GeorgeOrwell
WilliamGolding
KathrynStockett
PauloCoelho AlanRClarke
CharlotteBront MichaelMason
RayBradbury
SueMonk Kidd
MarkHaddon
JodiPicoult
StephenChbosky
HomerRobertFagles EVRieu FrericM...
JonKraukauer
WilliamGoldman
GabrielGarca Mrquez GregoryRabassa
Barbara Kingsolver
AlexandreDumas RobinBuss
Victor Hugo Lee Fahnestock NormanM...
MitchAlbom SauliusDagys
AmyTan
WilliamShakespeare RichardAndre...
KenKesey
NathanielHawthorne ThomasEConno...
DanBrown
TracyChevalier
DrSeuss
StephenKing Bernie Wrightson

1/34

Repository

- Import Data**
- Training Resources (connected)
 - Community Samples (connected)
 - Samples
 - Books Repository (Local)
 - Connections
 - Books (6/2/24 4:18 PM – 2 kB)
 - books Temp 53036 (6/2/24 12:09 PM – 4.5 MB)
 - Books_mongoDB (6/2/24 5:03 PM – 5 kB)
 - Local Repository (Local)
 - DB (Legacy)



Result History

ExampleSet (Select Attributes)

Data

Statistics

Visualizations

Annotations

Plot



Plot 1



Plot type



Histogram



Value columns

average_rating

Color



Number of Bins

Number of bins



Plot style

[Add new plot](#)

General



X-Axis



Y-Axis



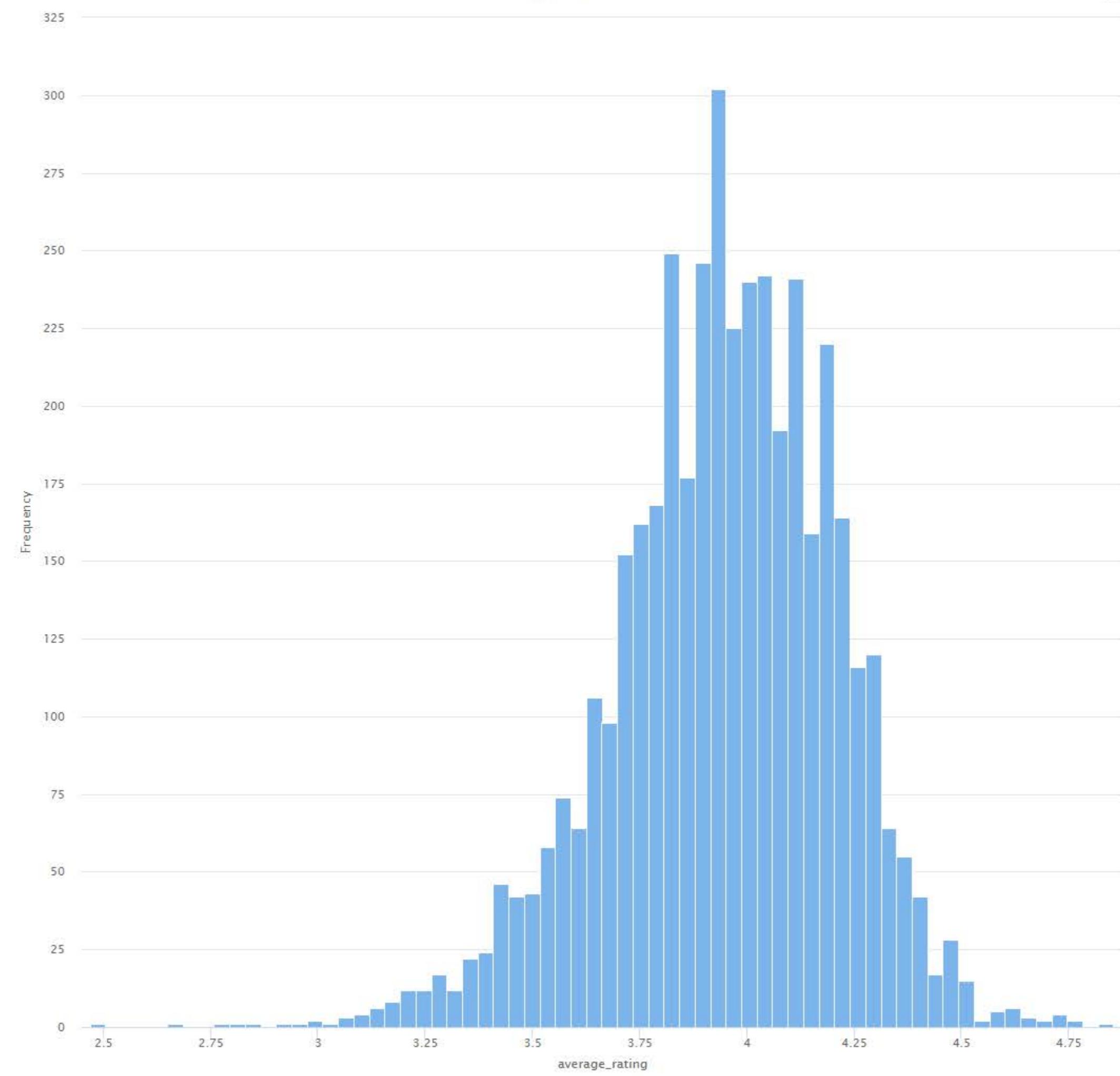
Title



Legend



Tooltip



Repository



Import Data

- ▶ Training Resources (connected)
- ▶ Community Samples (connected)
- ▶ Samples
- ▶ Books Repository (Local)
 - ▶ Connections
 - Books (6/2/24 4:18 PM – 2 kB)
 - books Temp 53036 (6/2/24 12:09 PM – 4.5 MB)
 - Books_mongoDB (6/2/24 5:03 PM – 5 kB)
 - ▶ Local Repository (Local)
 - DB (Legacy)



Result History

ExampleSet (Select Attributes)

Data

Statistics

Visualizations

Annotations

Plot

Plot 1

Plot type: Bar (Horizontal)

X-Axis column: ratings_count

Value columns: average_rating

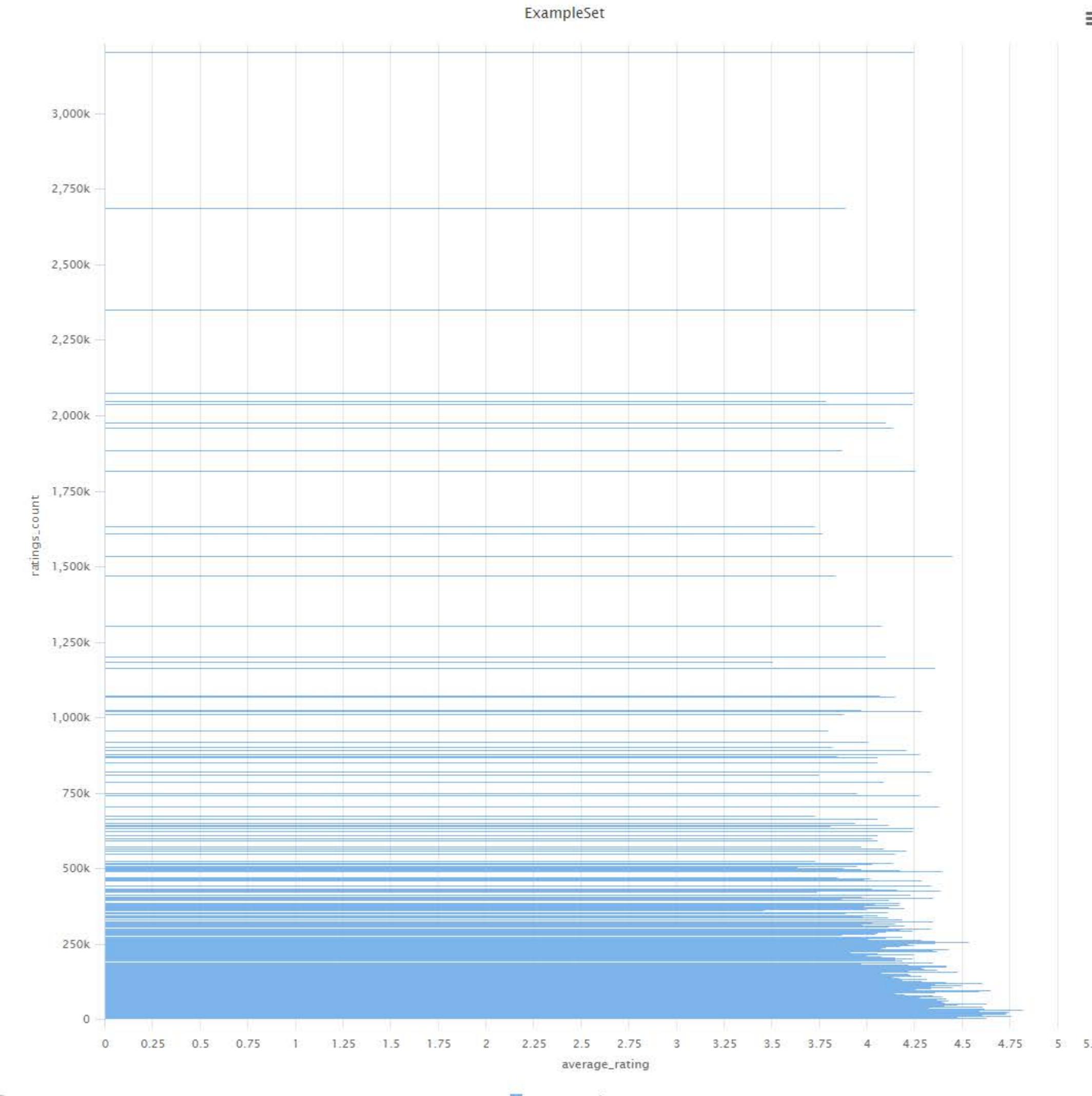
Aggregate data

Color Group: -

Stacking: No stacking

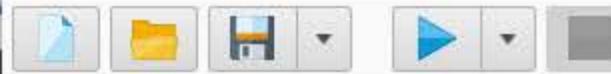
Plot style

[Add new plot](#)



Repository

- Import Data**
- ▶ **Training Resources** (connected)
- ▶ **Community Samples** (connected)
- ▶ **Samples**
- ▼ **Books Repository (Local)**
- ▶ **Connections**
- Books (6/2/24 4:18 PM – 2 kB)
- books Temp 53036 (6/2/24 12:09 PM – 4.5 MB)
- Books_mongoDB (6/2/24 5:03 PM – 5 kB)
- ▶ **Local Repository (Local)**
- DB (Legacy)



Result History

KNNClassification (k-NN)



Description

KNNClassification

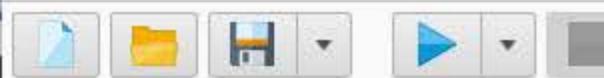
Weighted 5-Nearest Neighbour model for classification.
The model contains 4282 examples with 5 dimensions of the following classes:

HarperLee
FScottFitzgerald
JohnGreen
JRRTolkien
JDSalinger
JaneAusten
KhaledHosseini
GeorgeOrwellErichFrommCellster
GeorgeOrwell
AnneFrankEleanorRooseveltBMMooyaartDoubleday
AliceSebold
WilliamGolding
WilliamShakespeareRobertJackson
GillianFlynn
KathrynStockett
JohnSteinbeck
ArthurGolden
PauloCoelhoAlanRClarke
AudreyNiffenegger
ElizabethGilbert
CharlotteBrontMichaelMason
YannMartel
SaraGruen
MarkusZusak
RayBradbury
ShelSilverstein
AldousHuxley
SueMonkKidd
MarkTwainJohnSeelyeGuyCardwell
EBWhiteGarthWilliamsRosemaryWells
MarkHaddon
PaulaHawkins
EmilyBrontRichardJDunn
JodiPicoult
KurtVonnegutJr
MargaretMitchell
StephenChbosky
MaryWollstonecraftShelleyPercyByssheShelleyMauriceHindle
StephenKing
JaneAustenTonyTannerRosBallaster
HomerRobertFaglesEVRIeuFrericMuglerBernardKnox
AntoinedeSaintExupryRichardHowardDomMarcosBarbosaMelinaKarakosta
JeannetteWalls
JonKrakauer
CharlesDickensRichardMaxwellHablotKnightBrowne
JohnGrisham
ElieWieselMarionWiesel
WilliamGoldman
SEHinton
FrancesHodgsonBurnett
GabrielGarcaMrquezGregoryRabassa
OscarWildeJeffreyEugenides
BramStokerNinaAuerbachDavidJSkal
BarbaraKingsolver
DavidSedaris
MauriceSendak

Repository

Import Data

- ▶ Training Resources (connected)
- ▶ Community Samples (connected)
- ▶ Samples
- ▶ Books Repository (Local)
 - ▶ Connections
 - Books (6/2/24 4:18 PM – 2 kB)
 - books Temp 53036 (6/2/24 12:09 PM – 4.5 MB)
 - Books_mongoDB (6/2/24 5:03 PM – 5 kB)
 - ▶ Local Repository (Local)
 - ▶ DB (Legacy)



Result History

ExampleSet (Set Role)

KNNClassification (k-NN)

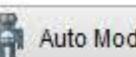


Data

Open in



Turbo Prep



Auto Model



Interactive Analysis

Filter (4,282 / 4,282 examples):

all

Repository

Import Data

Training Resources (connected)

Community Samples (connected)

Samples

Books Repository (Local)

Connections

Books (6/2/24 4:18 PM – 2 kB)

books Temp 53036 (6/2/24 12:09 PM – 4.5 MB)

Books_mongoDB (6/2/24 5:03 PM – 5 kB)

Local Repository (Local)

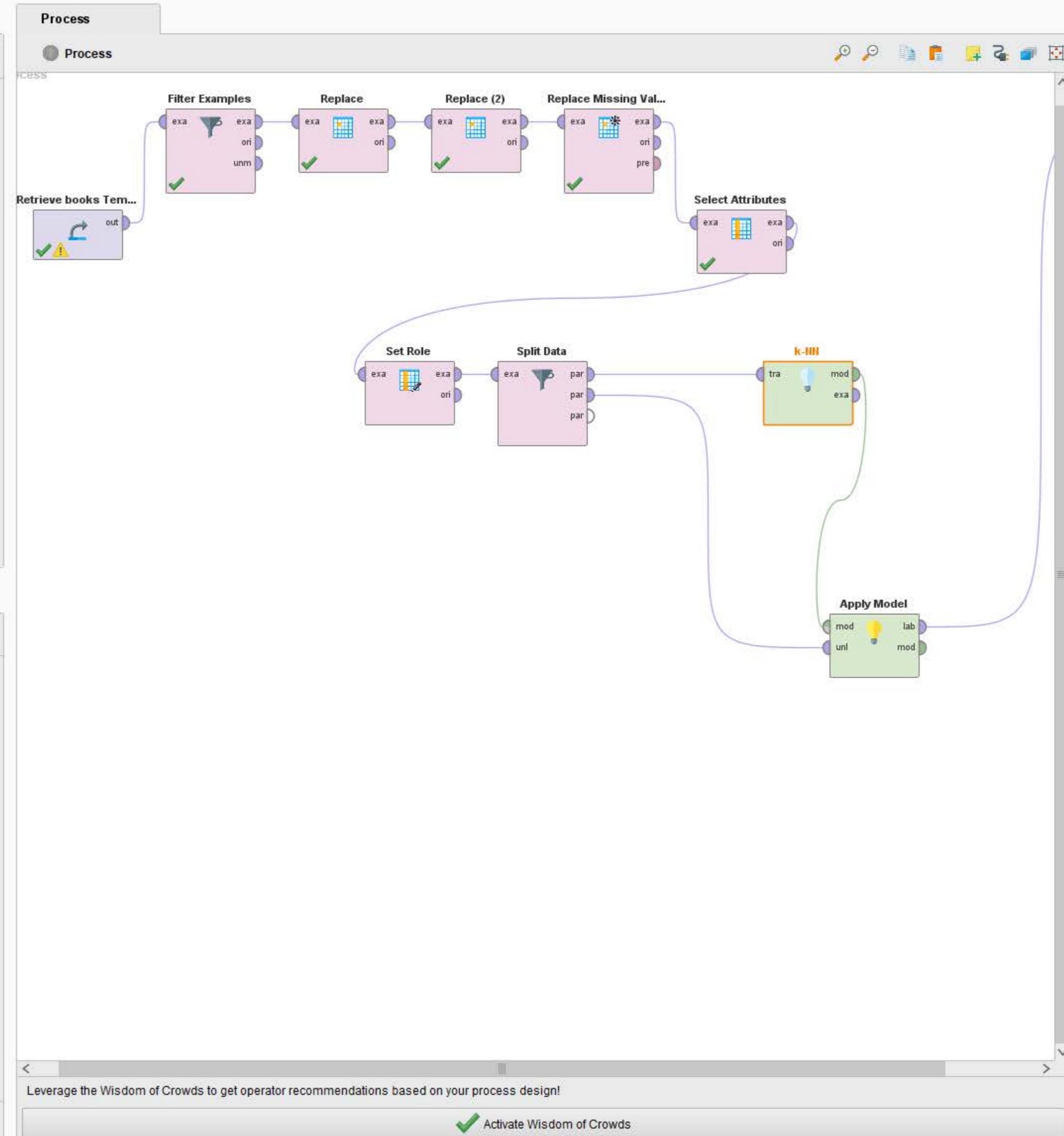
DB (Legacy)

Row No.	authors	title	book_id	books_count	average_rat...	ratings_count
1	HarperLee	ToKillaMocki...	4	487	4.250	3198671
2	FScottFitzger...	TheGreatGat...	5	1356	3.890	2683664
3	JohnGreen	TheFaultinOu...	6	226	4.260	2346404
4	JRR Tolkien	TheHobbit	7	969	4.250	2071616
5	JDSalinger	TheCatcherin...	8	360	3.790	2044241
6	JaneAusten	PrideandPrej...	10	3455	4.240	2035490
7	KhaledHoss...	TheKiteRunner	11	283	4.260	1813044
8	GeorgeOrwel...	1984	13	995	4.140	1956832
9	GeorgeOrwell	AnimalFarm	14	896	3.870	1881700
10	AnneFrankEl...	TheDiaryofaY...	15	710	4.100	1972666
11	AliceSebold	TheLovelyBo...	22	183	3.770	1605173
12	WilliamGolding	LordoftheFlies	28	458	3.640	1605019
13	WilliamShak...	RomeoandJu...	29	1937	3.730	1628519
14	GillianFlynn	GoneGirl	30	196	4.030	512475
15	KathrynStockett	TheHelp	31	183	4.450	1531753
16	JohnSteinbeck	OfMiceandMen	32	373	3.840	1467496
17	ArthurGolden	MemoirsofAG...	33	220	4.080	1300209
18	PauloCoelho...	TheAlchemist	35	458	3.820	1299566
19	AudreyNiffen...	TheTimeTrav...	38	167	3.950	746287
20	ElizabethGilb...	EatPrayLove	40	185	3.510	1181647
21	CharlotteBro...	JaneEyre	43	2568	4.100	1198557
22	SaraGruen	WaterforElep...	46	128	4.070	1068146
23	MarkusZusak	TheBookThief	47	251	4.360	1159741
24	RayBradbury	Fahrenheit451	48	507	3.970	570498
25	ShelSilverstein	WheretheSid...	50	45	4.290	1016888
26	AldousHuxley	BraveNewWo...	55	515	3.970	1022601
27	SueMonkKidd	TheSecretLif...	57	125	4.010	916189
28	MarkTwainJo...	TheAdventure...	58	2277	3.800	953758
29	EBWhiteGart...	CharlottesWeb	59	180	4.150	1064521
30	MarkHaddon	TheCuriousIn...	60	183	3.850	867553
31	PaulaHawkins	TheGirlonthe...	61	14	3.880	1008778
32	EmilyBrontRi...	WutheringHei...	63	2498	3.820	899195
33	JodiPicoult	MySistersKee...	64	125	4.060	863879

ExampleSet (4,282 examples, 1 special attribute, 5 regular attributes)

Repository

- + Import Data
- Training Resources (connected)
- Community Samples (connected)
- Samples
- Books Repository (Local)**
 - Connections
 - Books (6/24 4:18 PM - 2 kB)
 - books Temp 53036 (6/24 12:08 PM - 4.5 MB)
 - Books_mongoDB (6/24 5:38 PM - 8 kB)
- Local Repository (Local)
- DB (Legacy)



Parameters

k-NN

k: 5

weighted vote

measure types: MixedMeasures

mixed measure: MixedEuclideanDistance

Help

k-NN
RapidMiner Studio Core
Tags: Supervised, Classification, Regression, Model, Nearest Neighbors, Neighbours, Knn, Instance-based, Instancebased, Similarity, Similarities, Euclidean, Distances, Lazy

Synopsis
This Operator generates a k-Nearest Neighbor model, which is used for classification or regression.
[Jump to Tutorial Process](#)

Description
The k-Nearest Neighbor algorithm is based on comparing unknown Example with the k training Examples which are the nearest neighbors of the unknown Example.



Result History

ExampleSet (Apply Model)

Row No.	average_rat...	prediction(a...)	authors	title	book_id	books_count	ratings_count
1	4.260	3.983	JohnGreen	TheFaultinOu...	6	226	2346404
2	4.240	4.041	JaneAusten	PrideandPrej...	10	3455	2035490
3	4.140	4.045	GeorgeOrwel...	1984	13	995	1956832
4	3.970	4.054	AldousHuxley	BraveNewWo...	55	515	1022601
5	4.010	3.990	SueMonkKidd	TheSecretLif...	57	125	916189
6	3.730	4.060	HomerRobert...	TheOdyssey	79	1703	670326
7	4.040	4.092	GabrielGarca...	OneHundred...	94	555	490565
8	3.980	4.108	JeffreyEugeni...	Middlesex	115	125	488243
9	4	4.042	WilliamShak...	Hamlet	125	1929	515820
10	3.790	3.970	RebeccaWells	DivineSecret...	136	75	465676
11	4.390	3.910	AndyWeir	TheMartian	141	148	423344
12	3.670	3.922	DanBrown	DeceptionPoint	145	180	455610
13	3.850	3.982	TracyChevalier	GirlwithaPear...	148	169	467577
14	4.160	3.937	AnitaDiamant	TheRedTent	150	80	424981
15	3.880	3.942	WilliamShak...	Macbeth	154	1732	496018
16	4.290	3.919	DrSeuss	GreenEggsa...	157	72	457475
17	3.980	4.077	AnthonyBurg...	AClockworkO...	173	283	431195
18	4.110	3.933	MalcolmGlad...	OutliersTheSt...	193	120	353011
19	3.890	3.900	MalcolmGlad...	BlinkThePow...	211	116	348196
20	3.880	3.892	IanMcEwan	Atonement	212	155	347006
21	3.780	3.978	FranzKafkaSt...	TheMetamor...	213	1316	364933
22	3.920	4.031	GillianFlynn	DarkPlaces	226	131	333452
23	3.970	4.106	JohnGrisham	TheClient	227	134	320083
24	4.060	4.018	LewisCarroll...	AlicesAdvent...	229	845	340920
25	4.130	3.981	JaneAustenJ...	Persuasion	230	1451	365425
26	3.700	4.010	AugustenBurr...	Runningwith...	238	79	293878
27	4.430	4.107	RJPalacio	Wonder	250	124	228538
28	3.720	3.829	FrancesMayes	UndertheTus...	261	59	279264
29	3.940	4.093	LauraEsquiv...	LikeWaterfor...	272	177	263199
30	4	3.924	MLStedman	TheLightBetw...	313	113	243526
31	3.900	3.974	MariaSemple	WheredYouG...	320	78	215453
32	3.930	3.916	JanetFitch	WhiteOleander	326	96	245674
33	4	4.031	JodiPicoult	ThePact	331	76	221225

ExampleSet (856 examples, 2 special attributes, 5 regular attributes)

Repository

Import Data

Training Resources (connected)

Community Samples (connected)

Samples

Books Repository (Local)

Connections

Books (6/2/24 4:18 PM – 2 kB)

books Temp 53036 (6/2/24 12:09 PM – 4.5 MB)

Books_mongoDB (6/2/24 5:38 PM – 8 kB)

Local Repository (Local)

DB (Legacy)



Result History

ExampleSet (Apply Model)

Name	Type	Missing	Statistics			Filter (7 / 7 attributes): <input type="text" value="Search for Attributes"/>	
Label average_rating	Real	0	Min 2.670	Max 4.750	Average 3.937		
Prediction prediction(average_rating)	Real	0	Min 3.482	Max 4.318	Average 3.945		
authors	Polynomial	0	Least sneSeier [...] erson (0)	Most JohnGrisham (8)	Values JohnGrisham (8), StephenKing (8), ...[3630 more]		
title	Polynomial	0	Least sTORITelling (0)	Most SelectedPoems (2)	Values SelectedPoems (2), 1776 (1), ...[5701 more]		
book_id	Integer	0	Min 6	Max 9978	Average 4789.847		
books_count	Integer	0	Min 1	Max 3455	Average 112.980		
ratings_count	Integer	0	Min 4886	Max 2346404	Average 55383.290		

Repository

Import Data
▶ Training Resources (connected)
▶ Community Samples (connected)
▶ Samples
▶ Books Repository (Local)
Connections
Books (6/2/24 4:18 PM – 2 kB)
books Temp 53036 (6/2/24 12:09 PM – 4.5 MB)
Books_mongoDB (6/2/24 5:38 PM – 8 kB)
▶ Local Repository (Local)
DB (Legacy)



Result History

ExampleSet (Apply Model)

Data

Statistics

Visualizations

Annotations



Repository

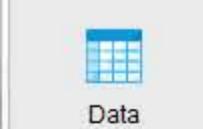
Import Data

- ▶ Training Resources (connected)
- ▶ Community Samples (connected)
- ▶ Samples
- ▶ Books Repository (Local)
 - ▶ Connections
 - Books (6/2/24 4:18 PM – 2 kB)
 - books Temp 53036 (6/2/24 12:09 PM – 4.5 MB)
 - Books_mongoDB (6/2/24 5:38 PM – 8 kB)
 - ▶ Local Repository (Local)
 - ▶ DB (Legacy)



Result History

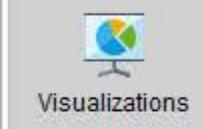
ExampleSet (Apply Model)



Data



Statistics



Visualizations



Annotations

Plot

Plot 1

Plot type: Histogram

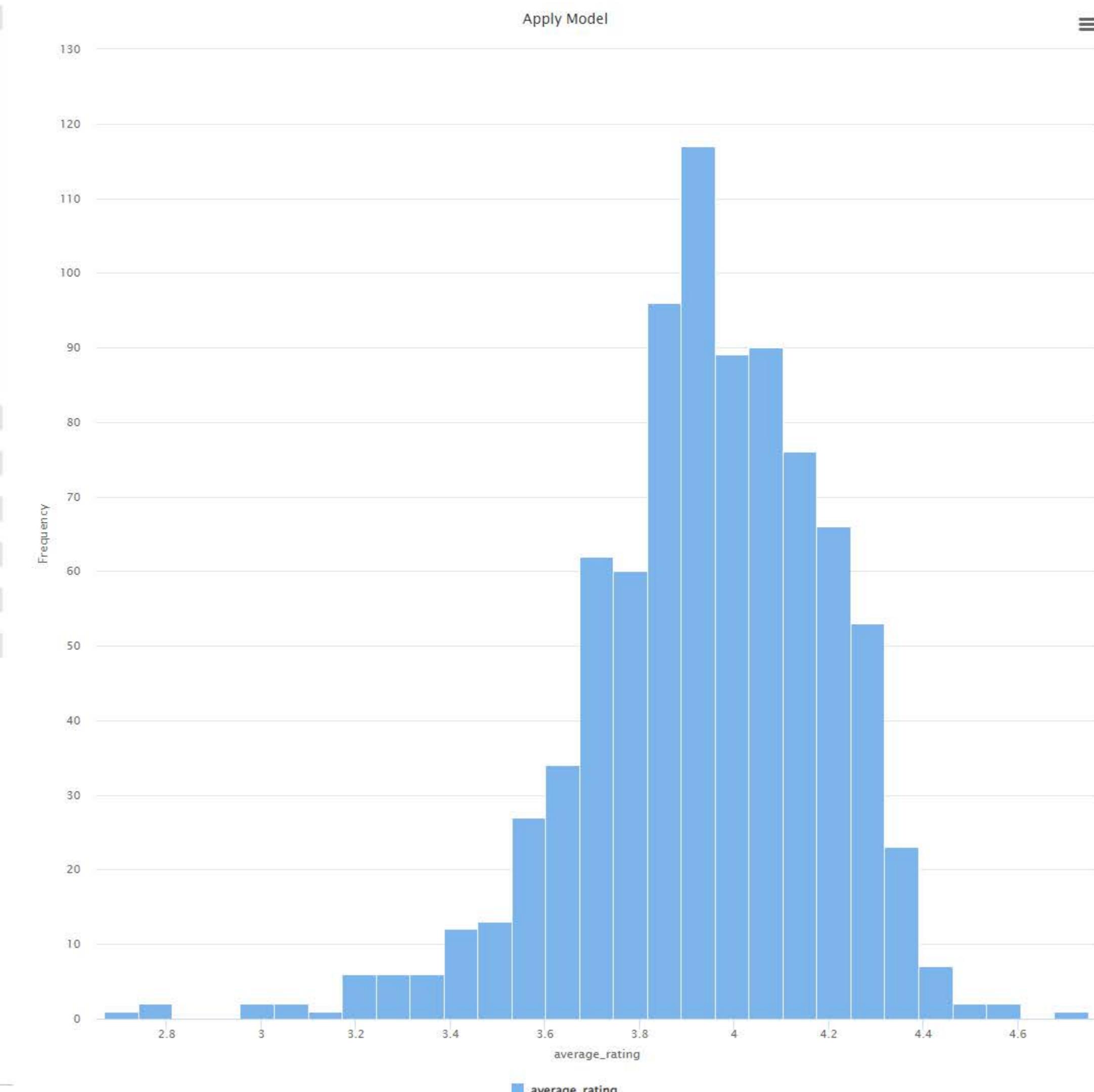
Value columns: average_rating

Color: -

Number of Bins: Number of bins

Plot style

[Add new plot](#)



Repository

Import Data

- Training Resources (connected)
- Community Samples (connected)
- Samples
- Books Repository (Local)
 - Connections
 - Books (6/2/24 4:18 PM – 2 kB)
 - books Temp 53036 (6/2/24 12:09 PM – 4.5 MB)
 - Books_mongoDB (6/2/24 5:38 PM – 8 kB)
 - Local Repository (Local)
 - DB (Legacy)

The screenshot displays the RapidMiner Studio Core interface with the following components:

- Repository** (Left): Shows connections to Training Resources, Community Samples, Samples, Books Repository (Local), Connections (Books, books Temp 53036, Books_mongoDB), Local Repository (Local), and DB (Legacy).
- Process** (Center): A process flow starting with "Retrieve books Tem..." (grey icon) which outputs to "Filter Examples" (pink icon). This is followed by two "Replace" operators (pink icons) and one "Replace Missing Val..." operator (pink icon). The output then goes to "Select Attributes" (pink icon). Below this, "Set Role" (pink icon) and "Split Data" (pink icon) operators are connected. The "Split Data" operator outputs to "k-NN" (green icon) and "Performance" (yellow icon). Finally, the "Performance" operator feeds into an "Apply Model" operator (orange icon), which is highlighted with a green border.
- Operators** (Bottom Left): A list of operators under categories: Segmentation (4), Visual (1), and Utility (1). Under Segmentation, "Performance" is selected. Other listed operators include Cluster Count Performance, Cluster Distance Performance, Cluster Density Performance, Item Distribution Performance, Extract Performance, Combine Performances, Performance (User-Based), Performance (Min-Max), Performance to Data, Multi Label Performance, Compare ROCs, Cross Validation, Process Control (1), Collections (1), and Performance Average (Robust).
- Parameters** (Top Right): Shows parameters for the "Apply Model" operator, including "application parameters" and an "Edit List (0...)" button.
- Help** (Bottom Right): Provides information about the "Apply Model" operator, including its synopsis ("This Operator applies a model on an ExampleSet."), description ("A model is first trained on an ExampleSet by another Operator, which is often a learning algorithm. Afterwards, this model can be applied on another ExampleSet. Usually, the goal is to get a prediction on unseen data or to transform data by applying a preprocessing model."), and tags (Predict, Predictions, Forecasts, Scores, Scoring, Trained, Test).



Result History KNNRegression (k-NN) × % PerformanceVector (Performance) ×



Description

KNNRegression

Weighted 5-Nearest Neighbour model for regression.
The model contains 3426 examples with 5 dimensions.



Annotations

Repository ×

Import Data

▶ Training Resources (connected)

▶ Community Samples (connected)

▶ Samples

▶ Books Repository (Local)

▶ Connections

Books (6/2/24 4:18 PM – 2 kB)

books Temp 53036 (6/2/24 12:09 PM – 4.5 MB)

Books_mongoDB (6/2/24 5:38 PM – 8 kB)

▶ Local Repository (Local)

DB (Legacy)



Result History KNNRegression (k-NN) % PerformanceVector (Performance)

Criterion root mean squared error

root_mean_squared_error: 0.279 +/- 0.000

Performance

Description

Annotations

root_mean_squared_error

root_mean_squared_error: 0.279 +/- 0.000

Repository

Import Data

Training Resources (connected)

Community Samples (connected)

Samples

Books Repository (Local)

Connections

Books (6/2/24 4:18 PM – 2 kB)

books Temp 53036 (6/2/24 12:09 PM – 4.5 MB)

Books_mongoDB (6/2/24 5:38 PM – 8 kB)

Local Repository (Local)

DB (Legacy)



Result History KNNRegression (k-NN) % PerformanceVector (Performance)

Criterion

- root mean squared error
- squared error**

squared_error

```
squared_error: 0.078 +/- 0.142
```

Performance Description Annotations

Repository

+ Import Data

- Training Resources (connected)
- Community Samples (connected)
- Samples
- Books Repository (Local)
 - Connections
 - Books (6/2/24 4:18 PM – 2 kB)
 - books Temp 53036** (6/2/24 12:09 PM – 4.5 MB)
 - Books_mongoDB (6/2/24 5:38 PM – 8 kB)
 - Local Repository (Local)
 - DB (Legacy)



Result History KNNRegression (k-NN) % PerformanceVector (Performance)

Performance

PerformanceVector

```
PerformanceVector:  
root_mean_squared_error: 0.279 +/- 0.000  
squared_error: 0.078 +/- 0.142
```

Description

Annotations

Repository

+ Import Data

- ▶ Training Resources (connected)
- ▶ Community Samples (connected)
- ▶ Samples
- ▶ Books Repository (Local)
 - ▶ Connections
 - Books (6/2/24 4:18 PM – 2 kB)
 - books Temp 53036 (6/2/24 12:09 PM – 4.5 MB)
 - Books_mongoDB (6/2/24 5:38 PM – 8 kB)
 - ▶ Local Repository (Local)
 - ▶ DB (Legacy)

Repository

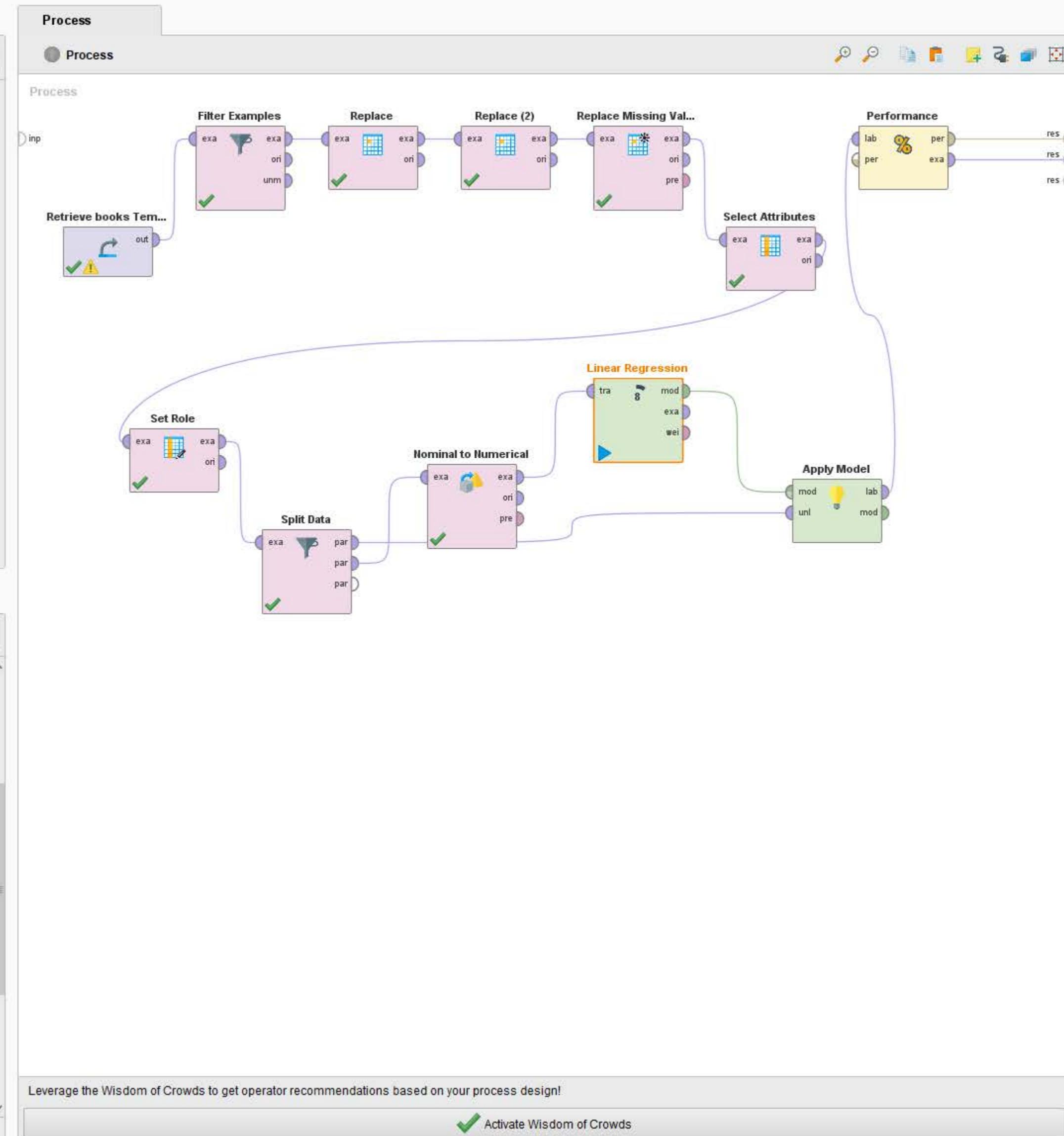
- + Import Data
- Training Resources (connected)
- Community Samples (connected)
- Samples
- Books Repository (Local)
 - Books (6/24 4:18 PM – 2 kB)
 - books Temp 53036 (6/24 12:08 PM – 4.5 MB)
 - Books_mongoDB (6/24 5:59 PM – 9 kB)
- Local Repository (Local)
- DB (Legacy)

Operators

Perform

- Validation (20)
- Performance (18)
 - Performance (Classification)
 - Performance (Binomial Classification)
 - Performance (Regression)
 - Performance (Costs)
 - Performance (Ranking)
 - Performance (Support Vector Count)
 - Performance (Attribute Count)
- Segmentation (4)
 - Cluster Count Performance
 - Cluster Distance Performance
 - Cluster Density Performance
 - Item Distribution Performance
- Performance
- Extract Performance
- Combine Performances
- Performance (User-Based)

No results were found.



Parameters

Linear Regression

feature selection: M5 prime

eliminate colinear features

min tolerance: 0.05

use bias

ridge: 1.0E-8

[Hide advanced parameters](#)

Help

Linear Regression

RapidMiner Studio Core

Tags: Supervised, Classification, Regression, Model, Least squares, Ordinary, Ridge, Ols, Glm, Generalized, Functions

Synopsis

This operator calculates a linear regression model from the input ExampleSet.

[Jump to Tutorial Process](#)

Description

Regression is a technique used for numerical prediction. Regression is a statistical measure that attempts to determine the strength of the relationship between one dependent variable (i.e. the label attribute) and a series of other changing variables known as independent variables (regular



Result History

ExampleSet (Apply Model)

PerformanceVector (Performance)

ExampleSet (//Books Repository/books Temp 53036)



Data

Open in Turbo Prep Auto Model Interactive Analysis

Filter (856 / 856 examples): all



Statistics



Visualizations



Annotations

Row No.	average_rat...	prediction(a...	books_count
1	4.260	3.941	226
2	4.240	3.773	3455
3	4.140	3.901	995
4	3.970	3.926	515
5	4.010	3.946	125
6	3.730	3.864	1703
7	4.040	3.924	555
8	3.980	3.946	125
9	4	3.852	1929
10	3.790	3.949	75
11	4.390	3.945	148
12	3.670	3.943	180
13	3.850	3.944	169
14	4.160	3.949	80
15	3.880	3.862	1732
16	4.290	3.949	72
17	3.980	3.938	283
18	4.110	3.946	120
19	3.890	3.947	116
20	3.880	3.945	155
21	3.780	3.884	1316
22	3.920	3.946	131
23	3.970	3.946	134
24	4.060	3.909	845
25	4.130	3.877	1451
26	3.700	3.949	79
27	4.430	3.946	124
28	3.720	3.950	59
29	3.940	3.943	177
30	4	3.947	113
31	3.900	3.949	78
32	3.930	3.948	96
33	4	3.949	76

ExampleSet (856 examples, 2 special attributes, 1 regular attribute)

Repository

Import Data

- ▶ Training Resources (connected)
- ▶ Community Samples (connected)
- ▶ Samples
- ▶ Books Repository (Local)
 - ▶ Connections
 - ▶ Books (6/2/24 4:18 PM – 2 kB)
 - ▶ books Temp 53036 (6/2/24 12:09 PM – 4.5 MB)
 - ▶ Books_mongoDB (6/2/24 9:45 PM – 10 kB)
- ▶ Local Repository (Local)
- ▶ DB (Legacy)



Result History

ExampleSet (Apply Model)

PerformanceVector (Performance)

ExampleSet (//Books Repository/books Temp 53036)



Data



Statistics



Visualizations



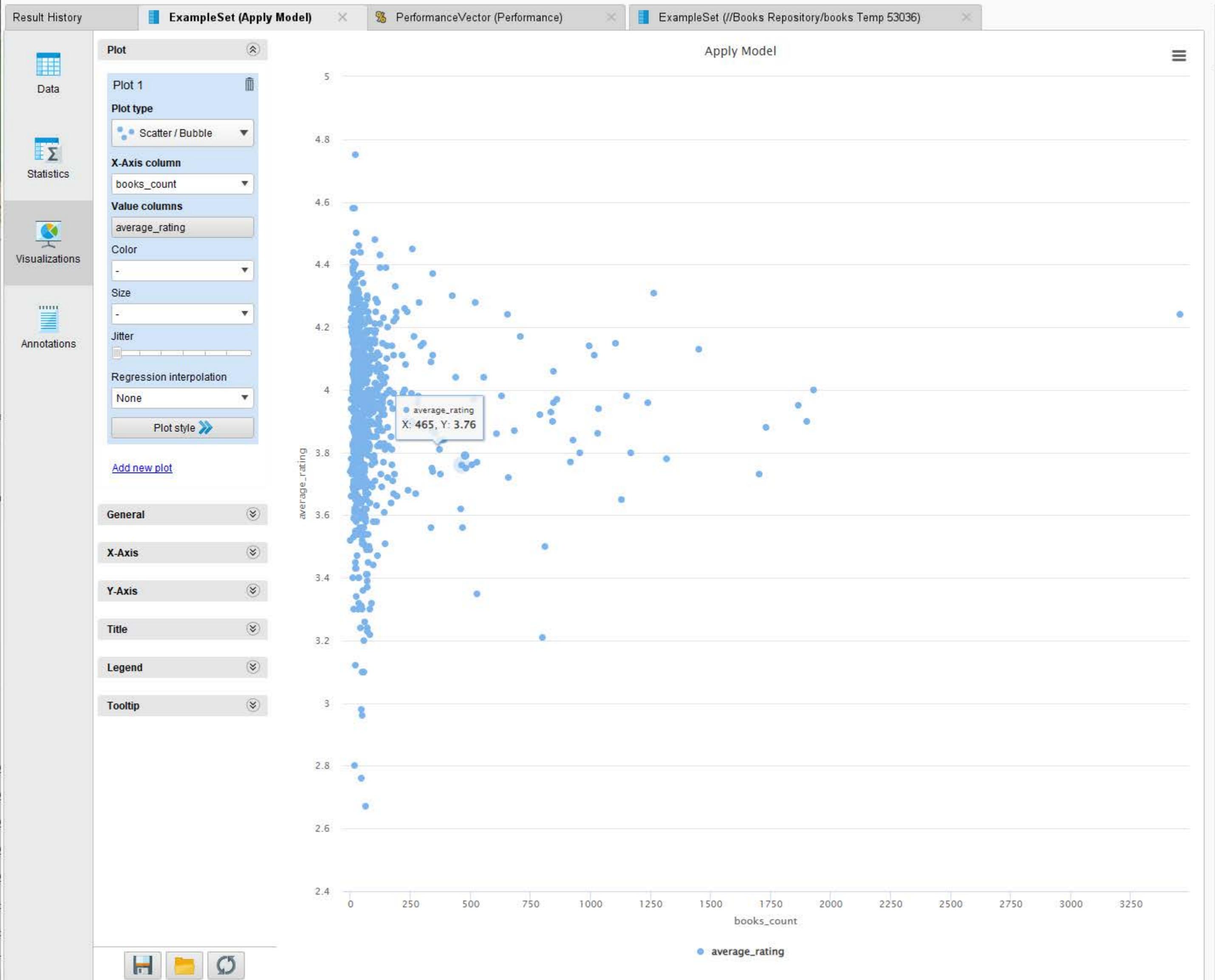
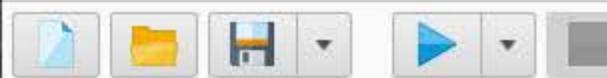
Annotations

Name	Type	Missing	Statistics	Filter (3 / 3 attributes):	Search for Attributes
Label average_rating	Real	0	Min 2.670 Max 4.750 Average 3.937		
Prediction prediction(average_rating)	Real	0	Min 3.773 Max 3.953 Average 3.947		
books_count	Integer	0	Min 1 Max 3455 Average 112.980		

Repository

Import Data

- ▶ Training Resources (connected)
- ▶ Community Samples (connected)
- ▶ Samples
- ▶ Books Repository (Local)
 - ▶ Connections
 - Books (6/2/24 4:18 PM – 2 kB)
 - books Temp 53036 (6/2/24 12:09 PM – 4.5 MB)
 - Books_mongoDB (6/2/24 9:45 PM – 10 kB)
 - ▶ Local Repository (Local)
 - ▶ DB (Legacy)





Result History

LinearRegression (Linear Regression)

ExampleSet (/Books Repository/books Temp 53036)

Data

Attribute	Coefficient	Std. Error	Std. Coefficient	Tolerance	t-Stat	p-Value	Code
books_count	-0.000	0.000	-0.045	1	-2.636	0.008	***
(Intercept)	3.953	0.005	?	?	806.257	0	****

Description

Annotations

Repository

Import Data

- ▶ Training Resources (connected)
- ▶ Community Samples (connected)
- ▶ Samples
- ▶ Books Repository (Local)
 - ▼ Connections
 - Books (6/2/24 4:18 PM – 2 kB)
 - books Temp 53036 (6/2/24 12:09 PM – 4.5 MB)
 - Books_mongoDB (6/2/24 9:45 PM – 10 kB)
 - ▶ Local Repository (Local)
 - DB (Legacy)

//Books Repository/Books_mongoDB* – RapidMiner Studio Educational 10.3.001 @ MANAGERONE

File Edit Process View Connections Settings Extensions Help

Views: Design Results Turbo Prep Auto Model Interactive Analysis

Find data, operators...etc All Studio

Result History LinearRegression (Linear Regression) ExampleSet (/Books Repository/books Temp 53036)

Data Description Annotations

LinearRegression

- 0.000 * books_count
+ 3.953

Repository

- Import Data
- Training Resources (connected)
- Community Samples (connected)
- Samples
- Books Repository (Local)
 - Connections
 - Books (6/2/24 4:18 PM – 2 kB)
 - books Temp 53036 (6/2/24 12:09 PM – 4.5 MB)
 - Books.mongoDB (6/2/24 9:45 PM – 10 kB)
 - Local Repository (Local)
 - DB (Legacy)

Click or drag to connect, ALT + click to disconnect, SHIFT + drag to move.

//Books Repository/Books_mongoDB* – RapidMiner Studio Educational 10.3.001 @ MANAGERONE

File Edit Process View Connections Settings Extensions Help

Views: Design Results Turbo Prep Auto Model Interactive Analysis

Find data, operators...etc All Studio

Repository

- + Import Data
- Training Resources (connected)
- Community Samples (connected)
- Samples
- Books Repository (Local)
 - Connections
 - Books (6/24 4:18 PM – 2 kB)
 - books Temp 53036 (6/24 12:08 PM – 4.5 MB)
 - Books_mongoDB (6/24 9:45 PM – 10 kB)
- Local Repository (Local)
- DB (Legacy)

Process

Process

```

    graph LR
        RE[Retrieve books Tem...] --> FE[Filter Examples]
        FE --> R1[Replace]
        R1 --> R2[Replace (2)]
        R2 --> RMV[Replace Missing Val...]
        RMV --> SA[Select Attributes]
        SA --> SR[Set Role]
        SR --> N2N[Nominal to Numerical]
        N2N --> LD[Linear Regression]
        LD --> SD[Split Data]
        SD --> RMV
    
```

The process starts with a "Retrieve books Tem..." operator, which feeds into a "Filter Examples" operator. This is followed by three "Replace" operators, each with different configurations (e.g., replacing missing values with mean, mode, or median). The output of these is then passed through a "Select Attributes" operator. This is followed by a "Set Role" operator, which then feeds into a "Nominal to Numerical" operator. Finally, the data is processed by a "Linear Regression" operator, and the results are split into training and testing sets via a "Split Data" operator.

Parameters

Linear Regression

- feature selection: M5 prime
- eliminate colinear features
- min tolerance: 0.1
- use bias
- ridge: 1.0E-8

[Hide advanced parameters](#)

Operators

Perform

- Validation (20)
- Performance (18)
- Predictive (7)
 - Performance (Classification)
 - Performance (Binomial Classification)
 - Performance (Regression)
 - Performance (Costs)
 - Performance (Ranking)
 - Performance (Support Vector Count)
 - Performance (Attribute Count)
- Segmentation (4)
 - Cluster Count Performance
 - Cluster Distance Performance
 - Cluster Density Performance
 - Item Distribution Performance
- Performance
- Extract Performance
- Combine Performances
- Performance (User-Based)

No results were found.

Help

Linear Regression

RapidMiner Studio Core

Tags: Supervised, Classification, Regression, Model, Least squares, Ordinary, Ridge, Ols, Glm, Generalized, Functions

Synopsis

This operator calculates a linear regression model from the input ExampleSet.

[Jump to Tutorial Process](#)

Description

Regression is a technique used for numerical prediction. Regression is a statistical measure that attempts to determine the strength of the relationship between one dependent variable (i.e. the label attribute) and a series of other changing variables known as independent variables (regular).

Leverage the Wisdom of Crowds to get operator recommendations based on your process design!

Activate Wisdom of Crowds



Result History

ExampleSet (Apply Model)

PerformanceVector (Performance)

ExampleSet (//Books Repository/books Temp 53036)



Data



Statistics



Visualizations



Annotations

Name	Type	Missing	Statistics	Filter (3 / 3 attributes):	Search for Attributes
Label average_rating	Real	0	Min 2.670 Max 4.750 Average 3.937		
Prediction prediction(average_rating)	Real	0	Min 3.773 Max 3.953 Average 3.947		
books_count	Integer	0	Min 1 Max 3455 Average 112.980		

Repository

Import Data	
Training Resources (connected)	
Community Samples	(connected)
Samples	
Books Repository (Local)	
Connections	
Books	(6/2/24 4:18 PM – 2 kB)
books Temp 53036	(6/2/24 12:09 PM – 4.5 MB)
Books.mongoDB	(6/2/24 9:45 PM – 10 kB)
Local Repository (Local)	
DB	(Legacy)



Result History

ExampleSet (Apply Model)

PerformanceVector (Performance)

ExampleSet (/Books Repository/books Temp 53036)

Data

Statistics

Visualizations

Annotations

Plot

Plot 1

Plot type: Scatter / Bubble

X-Axis column: books_count

Value columns: average_rating

Color: -

Size: -

Jitter: -

Regression interpolation: None

Plot style

Plot 2

Plot type: Line

X-Axis column: books_count

Value columns: books_count, average..

Aggregate data

Color Group: -

Stacking: No stacking

Plot style

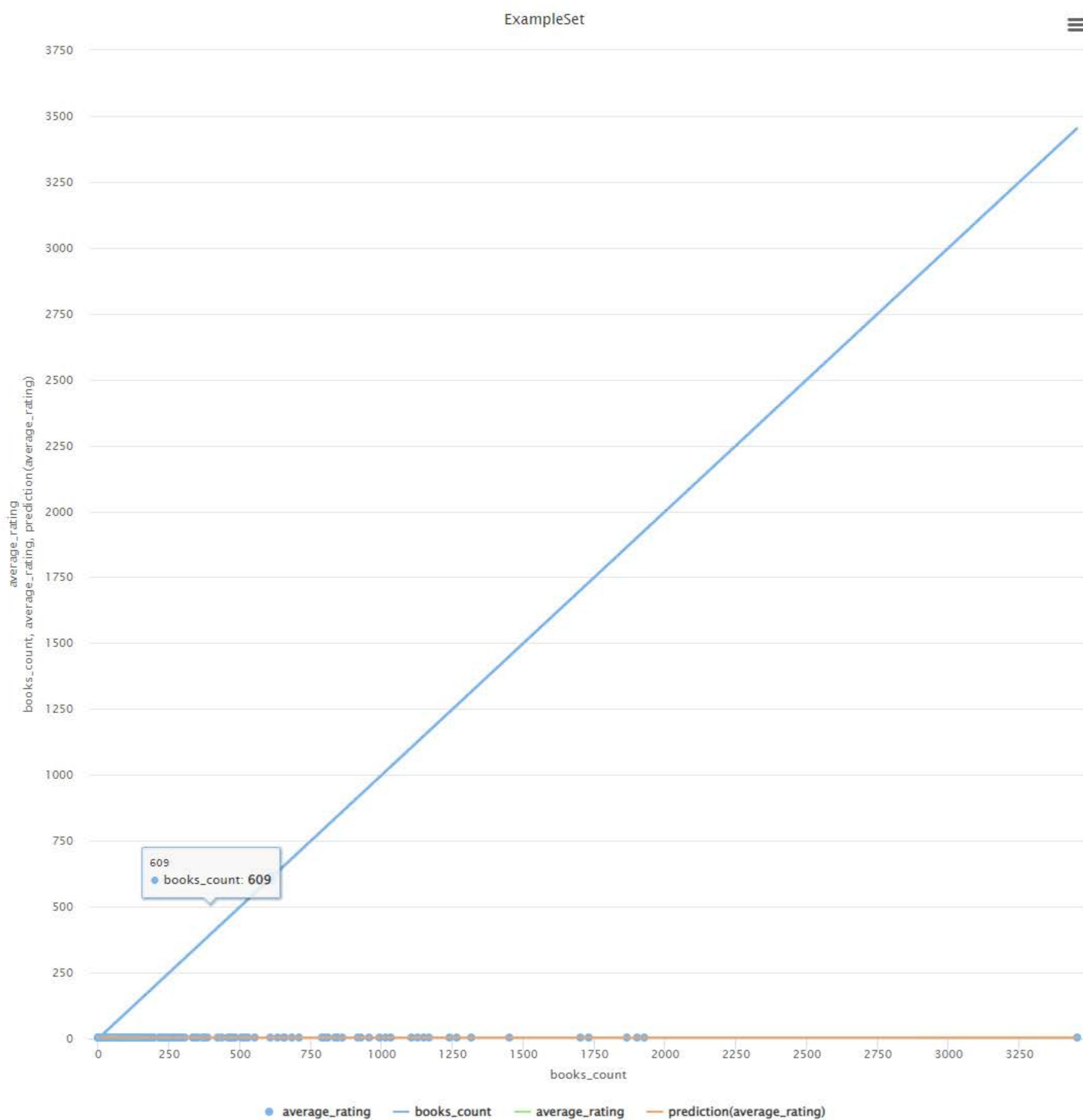
[Add new plot](#)

General

X-Axis

Y-Axis

Title



Repository

- Import Data**
- Training Resources** (connected)
- Community Samples** (connected)
- Samples**
- Books Repository (Local)**
 - Connections**
 - Books** (6/2/24 4:18 PM – 2 kB)
 - books Temp 53036** (6/2/24 12:09 PM – 4.5 MB)
 - Books_mongoDB** (6/2/24 9:45 PM – 10 kB)
 - Local Repository (Local)**
 - DB (Legacy)**



Result History

ExampleSet (Apply Model)

PerformanceVector (Performance)



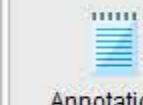
Data



Statistics



Visualizations



Annotations

Plot

Plot 1

Plot type

Scatter / Bubble

X-Axis column

average_rating

Value columns

average_rating

Color

-

Size

-

Jitter



Regression interpolation

None

Plot style

[Add new plot](#)

General

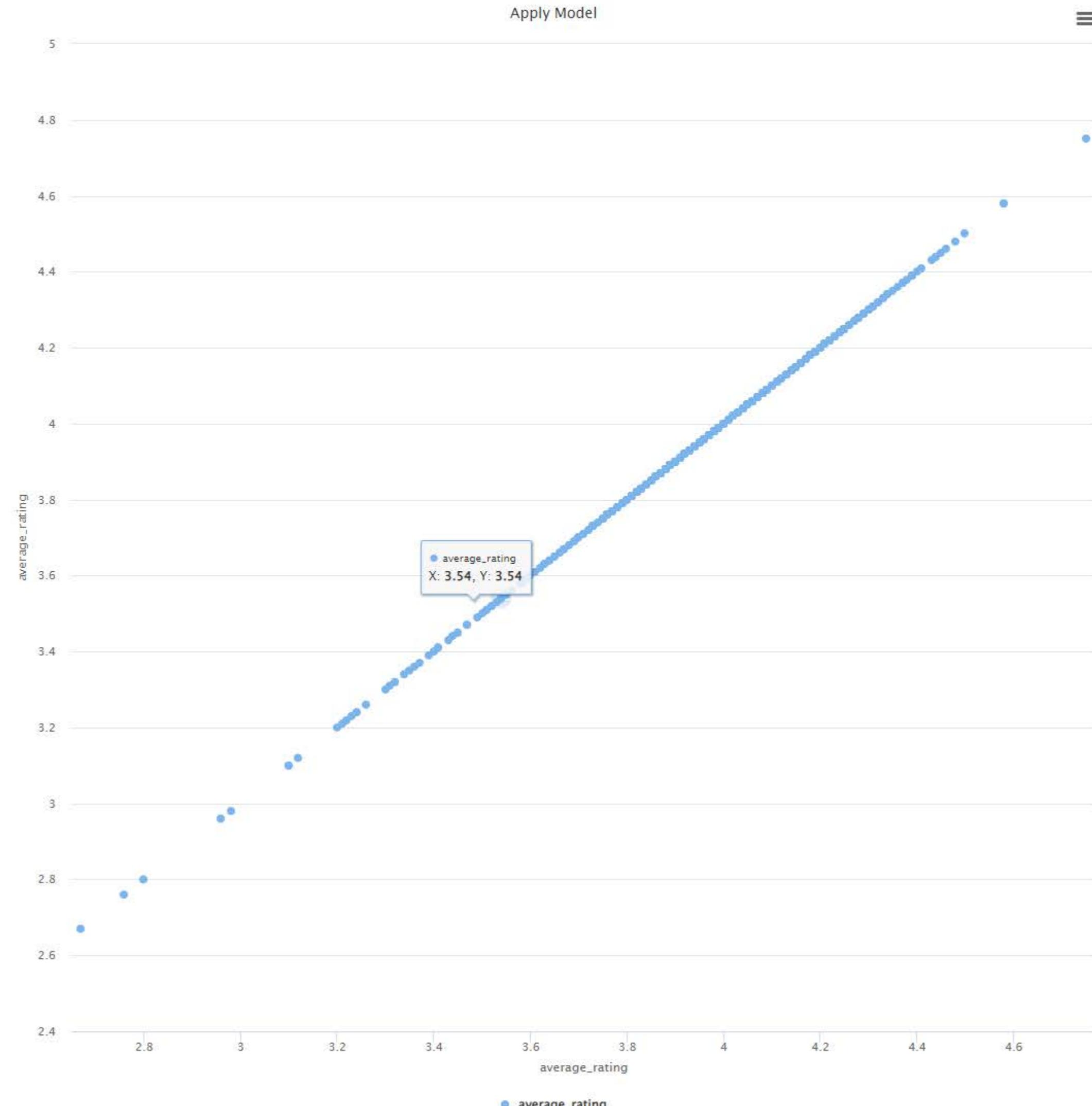
X-Axis

Y-Axis

Title

Legend

Tooltip



Repository

- + Import Data
- Training Resources (connected)
- Community Samples (connected)
- Samples
- Books Repository (Local)
 - Connections
 - books Temp 53036 (6/24 12:09 PM – 4.5 MB)
 - Books_mongoDB (6/3/24 7:40 AM – 8 kB)
 - Local Repository (Local)
 - DB (Legacy)