



SAS9 animated gifs mit SAS Graph & SAS Visual Analytics animations

SAS Information Catalog in VIYA nutzen

Gernot Engel , SAS Austria



Animated gif graph mit SAS ODS – Beispielcode

```
data stocks;
  set sashelp.stocks;
  Month = month(date);      /* 1, 2, 3, ..., 12 */
  Year = year(date);        /* 1986, 1987, ..., 2005 */
run;

proc sort data=stocks; by date; run;

ods graphics / imagefmt=GIF width=8in height=6in;      /* each image is 4in x 3in GIF */
options papersize=('8 in', '6 in')                    /* set size for images */
      nodate nonumber                                  /* do not show date, time, or frame number */
      animduration=1 animloop=no animoverlay           /* animation details duration = display seconds */
      printerpath=gif animation=start;                 /* start recording images to GIF */

ods printer file='C:\Users\autgee\OneDrive - SAS\Data\Eguide\Club\Anim.gif'; /* images saved into animated
GIF */

ods html close; /* suppress screen output - none */
*ods html file='C:\Users\autgee\OneDrive - SAS\Data\Eguide\Club\Anim.html';
```

```

proc sgplot data=stocks;
  title "Stock Performance";
    by year;
    series x=month y=close / group=stock;
    xaxis integer values=(1 to 12);
    yaxis min=10 max=210 grid;
run;

ods html select all;

options printerpath=gif animation=stop;
ods printer close;

/* create 20 images, one for each year */
/* each image is a time series */

/* set common vertical scale for all graphs */

/* restore screen output */

/* stop recording images */
/* close the animated GIF file */

```

SAS9 & VIYA Animated gif Erzeugung:

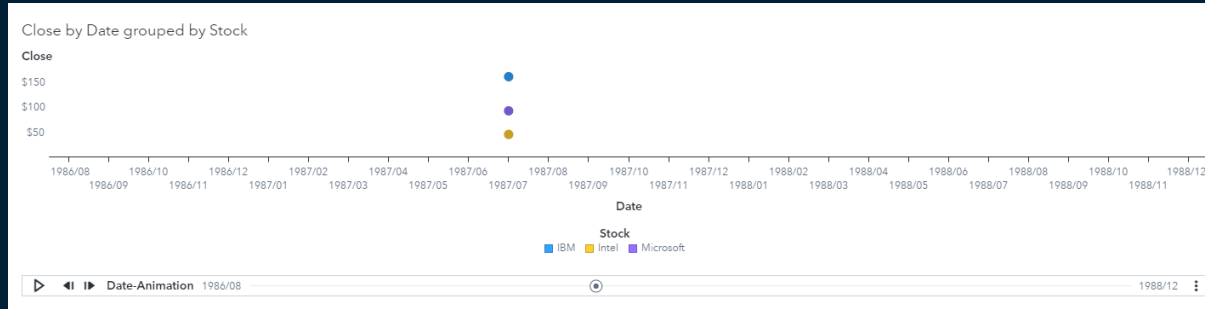
Useful links:

- o <https://blogs.sas.com/content/graphicallyspeaking/2013/05/23/animation-using-sgplot/>
- o <https://blogs.sas.com/content/iml/2016/08/22/animation-by-statement-proc-sgplot.html>
- o <https://communities.sas.com/t5/SAS-Communities-Library/Create-a-SAS-Viya-Job-with-a-prompt-using-HTML-Prompts/ta-p/805091>

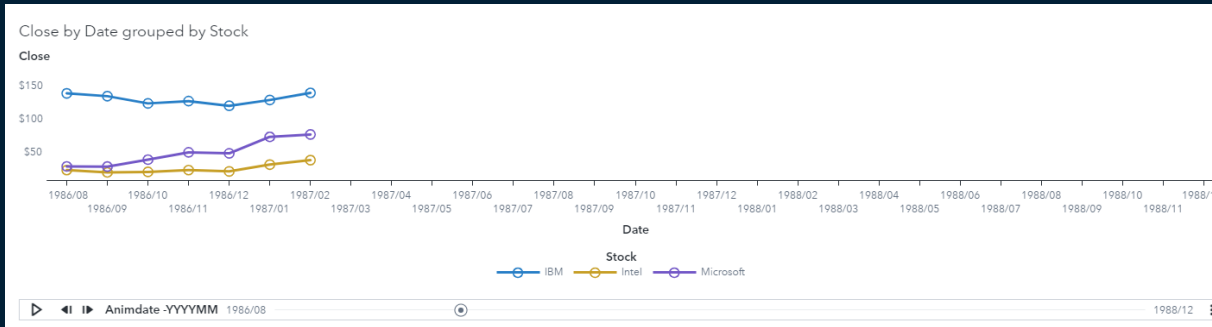
Visual Analytics Visualization – Animation & “sticky chart”

Bar & Line-charts in VisualAnalytics haben die Möglichkeit eine Animationsvariable zu belegen (DateTime or Date).

Im Animationsablauf werden immer nur die Datenpunkte zum gerade aktuelle Simulationsdatenpunkt angezeigt



Um einen „sticky“ chart zu erzeugen müssen Daten-Zeilen dupliziert werden, Also zu jedem Simulationszeitpunkt A alle Datenpunkte mit Datum <= Simulationsdatum A in den Daten vorhanden sein..



Demo

Visual Analytics Visualization – Animation & Datenlimits

Tipp: Für einige Grafik Objekte in VA gibt es eingesetzte Datenlimits der Anzeigeobjekte

Bsp: Barchart : Max 3000 rows an “Basisdaten” (darüber wird abgeschnitten)

-> Diese Limits können bei Bedarf in den VIYA – Override system data limits erhöht werden. (admin)

Hilfreiche links:

[SAS VA - high cardinality thresholds](#)

[Animation-Stick chart - SAS Communities Blog entry](#)

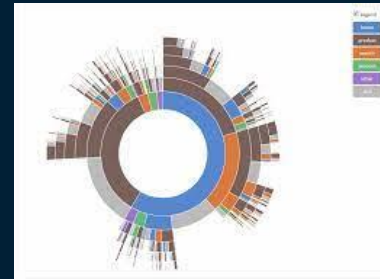
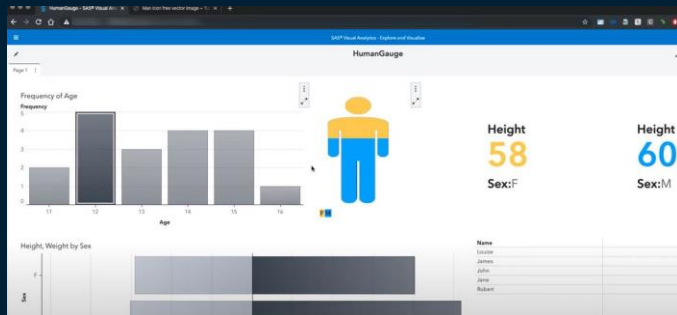
Weitere Option bei Verwendung von Visual Analytics: Data-driven content (DDC)Object :

->Verwendung des DDC Objektes um externe Java-Script Bibliotheken zu Nutzen

wie D3.js, Google Charts, CanvasJS ..

Ermöglicht <-> Interaktion/Datenaustausch zwischen DDC und VA Bericht

[Enhance SAS VA reports with dynamic Infographs](#)



Fragen ??

A series of horizontal bars of varying lengths and colors (teal, blue, green) on the left side of the slide.

SAS Information Catalog

Schnell die richtigen Daten finden & verstehen



SAS Information Governance ist ein intuitives Self-Service-Discovery-Portal für Analytik und KI.



Suchen & Finden



Assets Erkunden

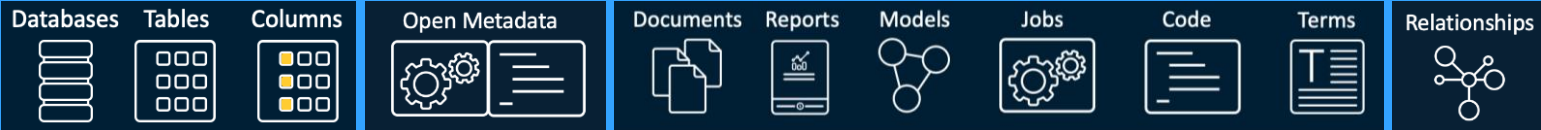


Handeln

Beschleunigt den analytischen Lebenszyklus

SAS Information Catalog - VIYA

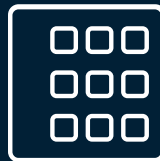
SAS Information Catalog



Plattform



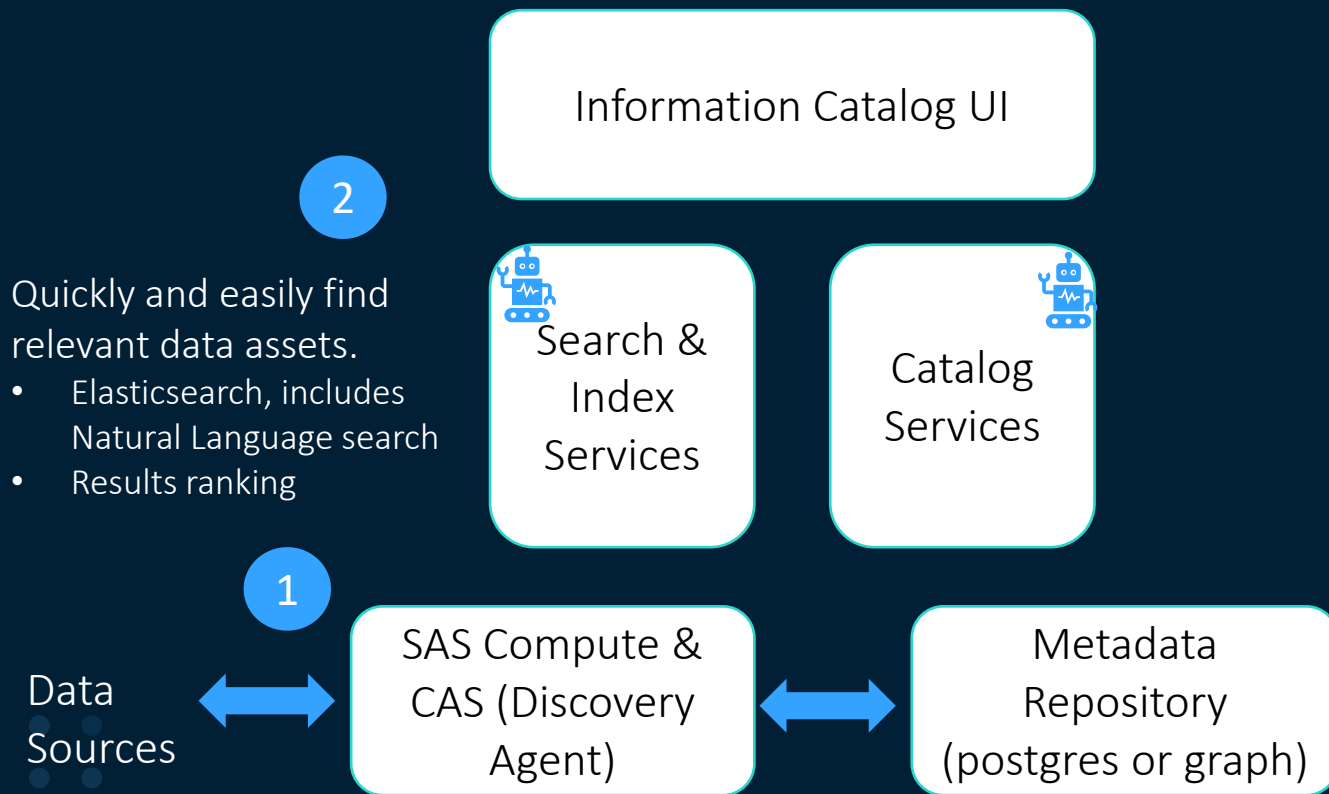
Daten



Prozesse



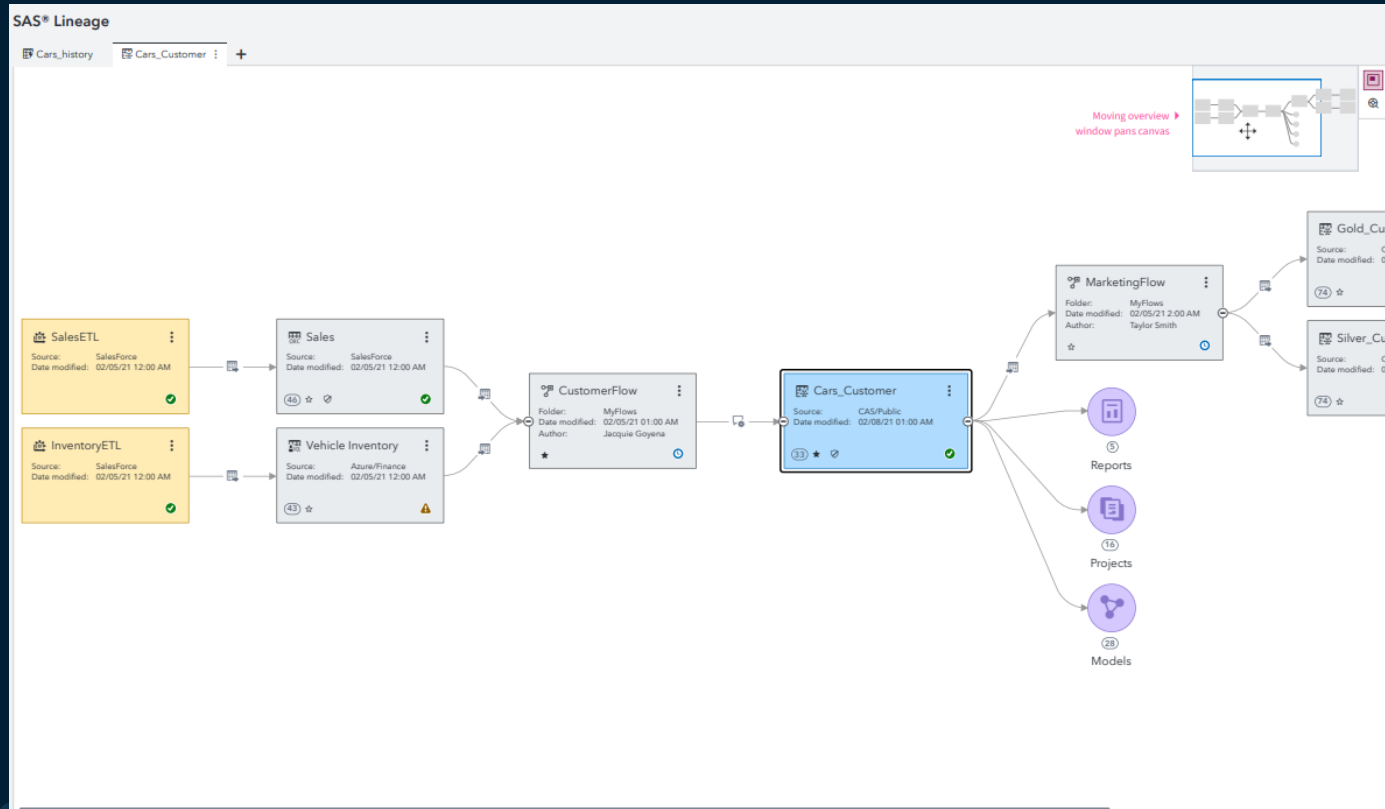
Information Catalog Architecture



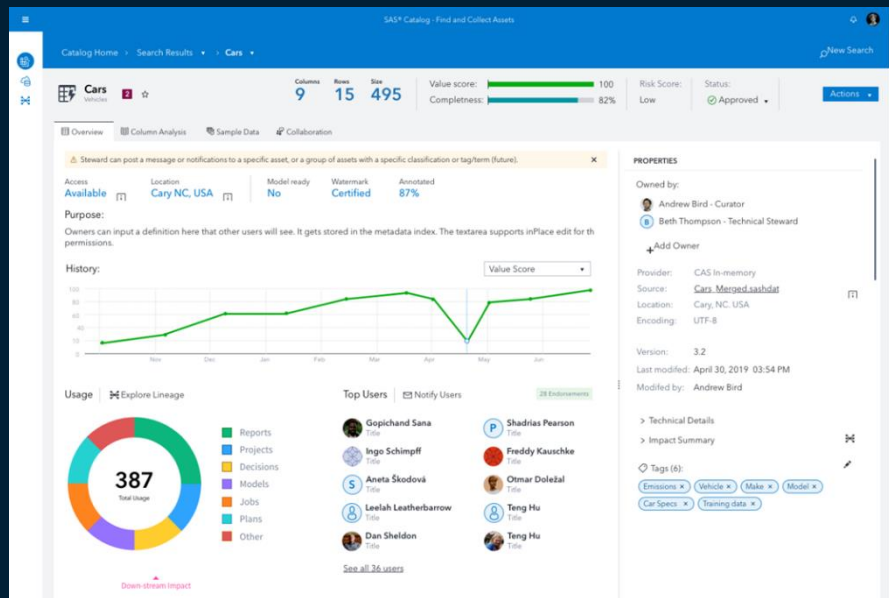
Demo

SAS Lineage

Woher kommen Daten und wo gehen sie?



Was ist SAS Information Governance?



- Inventarisierung aller verfügbaren Daten
- Business-User-orientierte Metadatenuche und Suchergebnisse
- Informationen zur Bewertung der Eignung von Daten für die vorgesehenen Zwecke
- Ermöglicht einfaches Onboarding und Ingesting von neuen Datenbeständen
- Sicherstellung von Governance und Überwachung von persönlichen und vertraulichen Daten

Understand Your Metadata

Descriptive Measures



WATER_CLUSTER

Samples

Columns

21

Rows

46.7 K

Size

9.6 MB

Completeness:

95%

Status:

Approved



Actions

Overview

Column Analysis

Sample Data

Date analyzed: 27 Jan 2021 4:25 pm

Descriptive Measures

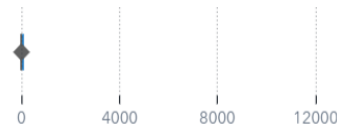
Metadata Measures

Data Quality Measures

#	Name	Maximum	Standard Deviation	Missing	Blanks	Outliers
11	⊕ Long	29.976798	0.053542	0	--	Yes
12	⊕ Property_type	0	0	0	--	No
13	⚠ Meter_Location	--	--	0	0	--
14	⚠ Clli	--	--	0	0	--
15	⊕ DMA	2	0.402329	0	--	Yes
16	⊕ Weekday	7	1.997622	0	--	No
17	⊕ Weekend	1	0.451387	0	--	No
18	⊕ Daily_W_C_M3	11910	230.931	0	--	Yes
19	⊕ Week	52	15.05769	0	--	No
20	⚠ US Holiday	--	--	45,056	0	--

Column Properties

Frequency distribution:



Quantiles

Minimum: 0
25%: 0.385
50%: 0.707
75%: 1.173
Maximum: 11910

Column name: ⊕ Daily_W_C_M3

Label: --

Type: double


Format: --



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 **WATER_CLUSTER**
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Completeness: 

Status:  Approved 



Actions 

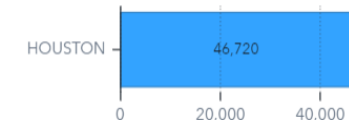
 Overview  Column Analysis  Sample Data


Date analyzed: 27 Jan 2021 4:25 pm

Descriptive Measures **Metadata Measures** Data Quality Measures

#	↑	Name	Label	Type	Actual Type	Logical Type	Format	Length
1		Year		double	--	Binary		
2		Month	Month	double	--	Nominal		
3		Day		double	--	Interval		
4		Date		double	--	Interval	MMDDYY	
5		Serial		double	--	Interval	BEST	
6		Property		double	--	Interval	BEST	
7		Address		char	String	Nominal	\$CHAR	
8		City		char	String	Unary	\$CHAR	
9		Zip		double	--	Interval	BEST	
10		Lat		double	--	Interval	BEST	
11		Long		double	--	Interval	BEST	


Frequency distribution:



Column name:  City
Label: --
Type: char
Actual type: String
Format: \$CHAR
Length: 7
Minimum length: 7
Maximum length: 7
Primary key candidate: No
Logical type: Unary
Semantic type: CITY
Information privacy: Candidate

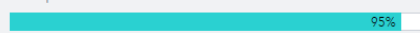
Understand Your Metadata

Data Quality Measures


 WATER_CLUSTER
Samples

Columns **21** Rows **46.7 K** Size **9.6 MB**

Completeness:



Status:

 Approved



Actions

Overview

Column Analysis

Sample Data

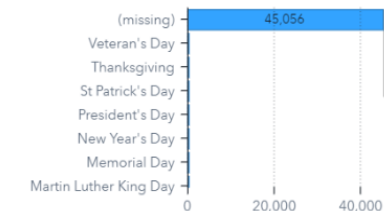
Date analyzed: 27 Jan 2021 4:25 pm

Descriptive Measures Metadata Measures **Data Quality Measures**

#	Name	Completeness	Uniqueness	Most Common Value	Least Common Value	Pattern Count	Semantic
9	Zip	100%	0%	77094	77020 (2 more)	--	POSTAL C
10	Lat	100%	0%	-95.408872 (1 more)	-95.71878 (19+ more)	--	LATITUDE
11	Long	100%	0%	29.785747 (1 more)	29.651167 (19+ more)	--	LONGITU
12	Property_type	100%	0%	0	0	--	GENERIC
13	Meter_Location	100%	0%	external	internal	1	
14	Cli	100%	0%	HSTNTXJA	HSTNTXHO	1	
15	DMA	100%	0%	2	1	--	
16	Weekday	100%	0%	4 (1 more)	1	--	
17	Weekend	100%	0%	0	1	--	
18	Daily_W_C_M3	100%	11%	0	0.023 (19+ more)	--	
19	Week	100%	0%	51 (19+ more)	52	--	DATE
20	US Holiday	4%	0%	Veteran's Day (11 m...	Independence Day	13	
21	CLUSTER	100%	0%	4	1	--	

Column Properties

Frequency distribution:



Column name:  US Holiday

Label: --

Type: char

Actual type: String

Format: \$CHAR

Length: 27

Minimum length: 8

Maximum length: 27

Primary key candidate: No

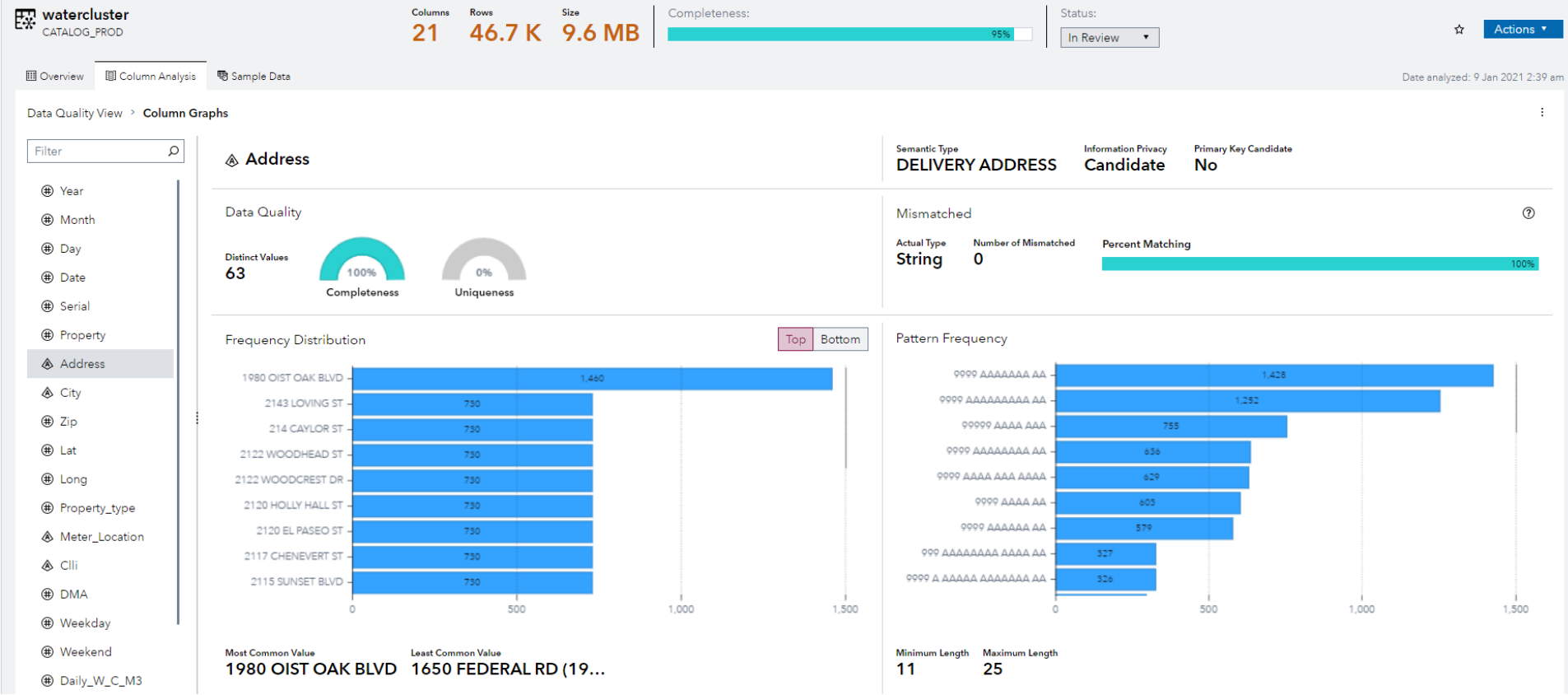
Logical type: Nominal

Semantic type: --

Information privacy: --

Understand Your Metadata

Column Graphs - Strings



SAS Information Governance – Open Metadata Exchange

SAS Information Catalog



Plattform Daten Prozesse



Offene Metadaten



- Nutzung von Egeria für die Verbindung und den Zugriff auf Metadaten aus Metadaten-Repositories von Drittanbietern, Datenplattformen und Open-Source-Tools (2022)

<https://odpi.github.io/egeria-docs/>



- Integration mit Datenkatalogen (Alation, Collibra, usw.) über APIs



Fragen ??

External Resources:

[SAS Youtube Video IC](#)

[Information Catalog User Guide](#)

SAS Information Governance on SAS.com

https://www.sas.com/en_us/software/information-governance.html

Gernot.engel@sas.com