Data Governance and Privacy Tutorial

Watson Knowledge Catalog As-A-Service powered by Cloud Pak for Data

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Overview

Data governance is the overall management of data availability, relevancy, usability, integrity, and security in an enterprise. It helps organization manage their information, knowledge, and answer questions such as:

- What data do we have?
- What do we know about our information?
- Does this data adhere to company policies and rules?
- What is the quality of our data?

Take this tutorial to learn how to prepare trusted data with the Data Governance and Privacy use case of the data fabric trial. Your goal is to create trusted data assets by enriching your data and running data quality analysis.

The story for the tutorial is that Golden Bank has several departments that need access to high-quality customer mortgage data. As a Data Steward on the governance team, you must sort and organize the company's data to provide high-quality and protected data assets that data consumers can easily find in a self-service catalog.

In this tutorial, you will complete these tasks:

- 1. Create a catalog.
- 2. Create a category.
- 3. Add business terms.
- 4. Import data into the project.
- 5. Enrich the data.
- 6. View the results of the metadata enrichment.
- 7. Publish assets to a catalog.

Prerequisites

Sign up for Cloud Pak for Data as a Service

You must sign up for Cloud Pak for Data as a Service and provision the necessary services for the Data Governance and Privacy use case.

You can sign up for Cloud Pak for Data as a Service in any of these ways:

- Sign up for a data fabric trial
- Sign up for a personal Cloud Pak for Data as a Service account
- Sign up for your organization's account

Provision the necessary services

ightharpoonup To preview this task, watch the video beginning at 01:05.

Follow these steps to verify or provision the necessary services.

- From the Cloud Pak for Data navigation menu, choose Services > Service instances.
- 2. Use the **Product** drop-down box to determine if there is an existing Watson Knowledge Catalog service instance.
- 3. If you need to create a Watson Knowledge Catalog service instance, click **Add** service.
 - 0. Select Watson Knowledge Catalog.
 - 1. Select the **Lite** plan.
 - 2. Click Create.
- 4. Repeat these steps to verify or provision the Cloud Object Storage service.

Create the sample project

To preview this task, watch the video beginning at <u>01:38</u>.

If you haven't already created the sample project for this tutorial, follow these steps.

- 1. Access the <u>Data Governance and Privacy guided tutorial sample project</u> in the gallery.
- 2. Click Create project.
- 3. If prompted to associate the project to a Cloud Object Storage instance, select a Cloud Object Storage instance from the list.
- 4. Click Create.
- 5. Click **View new project** to verify the project and assets were created successfully. **Note:** If this is your first time accessing a project, you may see a guided tour asking if you want to tour of projects. For now, click **Maybe later**.
- 6. Click the **Assets** tab.
- 7. From the •Overflow menu at the end of the Banking.csv data asset row, choose Download, and save it to your computer. You'll use that file in a later step.

Trust Your Data Tutorial

Step 1: Create a catalog

 \blacksquare To preview this task, watch the video beginning at <u>02:33</u>.

Before you start working with data, create a catalog where you will publish data to share it with your organization. With the Watson Knowledge Catalog Lite plan, you can create only two catalogs. If you already have a catalog, you can skip this step.

Otherwise, follow these steps to create a catalog.

Note: If this is your first time accessing a catalog, you may see a guided tour asking if you want to tour of catalogs. For now, click **Maybe later**.

- From the Cloud Pak for Data navigation menu, choose Catalogs > View all catalogs.
- 2. Click Create Catalog.
- 3. For the *Name*, type Mortgage Approval Catalog. Type the catalog name, exactly as shown with no leading or trailing spaces. If prompted to associate the catalog to a Cloud Object Storage instance, select a Cloud Object Storage from the list.
- 4. Select **Enforce data policies**, confirm the selection, and accept the defaults for the other fields.
- 5. Click Create.

Your catalog is now ready for you to share assets with your organization.

Step 2: Create a category

To preview this task, watch the video beginning at <u>02:59</u>.

You need a category to contain the business terms that you'll import in the next step. Categories act like folders to organize your governance artifacts and the people who can author and manage those artifacts. Follow these steps to create a category.

- From the Cloud Pak for Data as a Service navigation menu, choose Governance
 Categories.
- 2. Click Add category > New category.
- 3. For the name, type Banking.
- 4. Click Create.

The Banking category is ready for you to import business terms.

Step 3: Add business terms

To preview this task, watch the video beginning at 03:25.

Now import business terms into the new category. You'll use them to enrich your data assets in a later step. Business terms are standardized definitions of business concepts so that your data is described in a uniform and easily understood way across your enterprise. Follow these steps to import the business terms from a file.

- From the Cloud Pak for Data as a Service navigation menu, choose Governance
 Business terms.
- 2. Click Add business term > Import from file.
- 3. Click Add file.
 - 0. Select the **banking.csv** file that you downloaded earlier.
 - 1. Click Open.
- 4. Click Next.
- 5. Select **Replace all values**, and click **Import**.
- Click Go to task to see the draft business terms. If you miss the notification, then from the Cloud Pak for Data as a Service navigation menu, choose
 Governance > Task inbox.
- 7. Select the **Publish business terms** checkbox, and then click **Publish**. Click **Publish** to confirm.

You are now ready to import the data to a project which you will then enrich with the imported business terms.

Step 4: Import data to a project

To preview this task, watch the video beginning at 04:30.

The sample project includes a connection to a Db2 Warehouse instance which contains the mortgage assets. You can import technical metadata associated with the data assets into a project or a catalog to inventory, evaluate, and catalog these assets. Technical metadata describes the structure of data objects. Follow these steps to import the data assets.

- From the Cloud Pak for Data navigation menu, choose Projects > View all projects.
- 2. Click the **Data Governance and Privacy** project.
- 3. Click the **Assets** tab.
- 4. Click **New asset**.
- 5. Scroll down to select **Metadata Import**.
- 6. For the name, type Mortgage data metadata import.
- 7. Click **Next** to continue.
- 8. For Select target, select **This project**, and click **Next** to continue.
- 9. For Select scope, click **Select connection**.
 - 0. Select the **Data Fabric Trial Db2 Warehouse** connection.
 - 1. Click the **WKC_MORTGAGE** schema.
 - 2. Select the following tables:
 - COMMERICIAL CLIENT
 - CREDIT SCORE
 - HOUSE_PRICE
 - MORTGAGE APPLICANTS
 - MORTGAGE_APPLICATION
 - 3. Review the list of tables in the side panel, and then click **Select**.

- 10.Click **Next** to continue to the schedule.
- 11. Click **Next** to continue to the review.
- 12.Review the summary of the import, and click **Create**. The metadata import job will start.
- 13.Click the **refresh** icon to watch the status change from *Queued* to *In progress* to *Imported*. When the job run is complete, you will see the five assets listed.

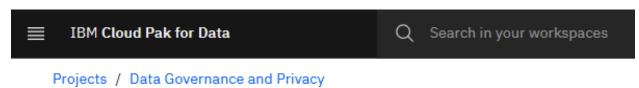
Your next step is to enrich the imported data assets with the imported business terms.

Step 5: Enrich the imported data

To preview this task, watch the video beginning at 05:51.

You can enrich data assets with information that helps users to find data faster, to decide whether the data is appropriate for the task at hand, whether they can trust the data, and how to work with the data. Such information includes, for example, terms that define the meaning of the data, rules that document ownership or determine quality standards, or reviews. Follow these steps to enrich the imported data.

1. Click the **Data Governance and Privacy** project name in the navigation trail.



- 2. On the Assets tab, click New asset.
- 3. Select Metadata Enrichment.
- 4. For the name, type Mortgage data metadata enrichment.
- 5. Click **Next** to continue.
- 6. Click **Select data from project**.
 - 0. Select **Metadata import**.
 - Select Mortgage data metadata import which includes the following assets:
 - COMMERICIAL CLIENT
 - CREDIT SCORE
 - HOUSE_PRICE
 - MORTGAGE_APPLICANTS
 - MORTGAGE APPLICATION
 - 2. Click Select.
- 7. Click **Next** to continue to the enrichment objective.

- 8. Select all enrichment objectives:
 - 0. Profile data
 - 1. Analyze quality
 - 2. Assign terms
- 9. Click **Select categories**.
 - 0. Select [uncategorized] and Banking.
 - 1. Click Select.
- 10. For the *Sampling*, select **Basic**.
- 11.Click **Next** to continue to the schedule.
- 12.Click **Next** to continue to the review.
- 13.Click Create.
- 14. The metadata enrichment asset will display. The job may take several minutes to complete. Click the **refresh** icon to watch the status change from *Queued* to *In progress* to *Finished*. When the job run is complete, you will see the five assets listed.

Step 6: View the results of the metadata enrichment

 \blacksquare To preview this task, watch the video beginning at <u>07:30</u>.

After Metadata enrichment run is completed, follow these steps to view the enriched data.

- 1. From the Mortgage data metadata enrichment screen, click the Columns tab.
- 2. In the list of *Columns*, locate the **EMAIL_ADDRESS** column for the *MORTGAGE_APPLICANTS* asset.
 - 0. Click the **Overflow** menu at the end of the *EMAIL_ADDRESS* for *MORTGAGE_APPLICANTS* row, and choose **View column details**.
 - 1. In the side panel on the *Details* tab, you will see profiling information such as: Format, Frequency distribution, Statistics.
 - 2. In the side panel, click the **Governance** tab. This tab includes the data classes and business terms that were auto-assigned during the metadata enrichment. Note that you may also see suggested business terms and data classes, and manually assign them.
 - 3. To review the suggested terms and manually assign them:
 - 0. Click Suggested business terms.
 - 1. For Address, click Assign.
- 3. At the end of the *EMAIL_ADDRESS* column for the *MORTGAGE_APPLICANTS* asset row, click the *Overflow menu, and choose View data quality. Watson Knowledge Catalog automatically generates a data quality score for each column and data asset by analyzing every value in every record according to pre-built dimensions.
- 4. Click the **X** to close the *Data quality* window.

- 5. For the CITY column for the CREDIT_SCORE asset, click the *Overflow menu, and choose Mark as reviewed.
- 6. Click the **Assets** tab.
- 7. In the list of *Assets*, for the *MORTGAGE_APPLICANTS* asset, click the •Overflow menu, and choose View asset details.
 - In the side panel, click the **Governance** tab to see business term auto assignment.
 - 1. To manually assign business terms, click the **Edit** icon.
 - 2. Search for social. If there are no results, then make sure the dropdown list is set to **All terms** instead of *Suggested terms*.
 - 3. Select Social Security Number.
 - 4. Click **Assign**.

The next step is to publish the enriched data to a catalog to share with your organization.

Step 7: Publish data to a catalog

 \blacksquare To preview this task, watch the video beginning at <u>08:50</u>.

Now that you have enriched data, you want to publish those data assets to a catalog so data scientists and data analysts can use the enriched data assets. Follow these steps to store the enriched data assets in a catalog for others to have access to the trusted data.

- 1. Click the **Data Governance and Privacy** project name in the navigation trail.
- 2. Click the **Assets** tab.
- 3. Navigate to **Data > Data asset**.
- Select the COMMERICIAL_CLIENT, HOUSE_PRICE,
 MORTGAGE_APPLICANTS, and MORTGAGE_APPLICATION data assets from the list, and click Publish to catalog.
 - 0. For the Target catalog, select Mortgage Approval Catalog.
 - 1. For the MORTGAGE_APPLICANTS asset, click the **pencil** icon, and change the name to MORTGAGE_APPLICANTS_TRUST.
 - 2. For the Tag, type trusted, and click + (plus sign).
 - Notice that the data asset and the connection asset will be added to the catalog. Click **Publish**.
- 5. Deselect all checked assets, then select the checkbox next to the **CREDIT SCORE** asset from the list, and click **Publish to catalog**.
 - 0. For the *Target* catalog, select **Mortgage Approval Catalog**.
 - 1. For the *Tag*, type confidential, and click + (plus sign).
 - 2. For the *Tag*, type trusted, and click + (plus sign).
 - 3. Click Publish.
- From the Cloud Pak for Data navigation menu, choose Catalogs > View all catalogs.

- 7. Click Mortgage Approval Catalog.
- 8. In the *Filter by > Any tag* drop down list, select **trusted**. Verify that the five data assets were added to the catalog.

As a Data Steward on the governance team, you have learned how to sort and organize the company's data in order to provide high-quality and protected data assets that data consumers can easily find in a self-service catalog.

Protect Your Data Tutorial

Take this tutorial to protect your data with the Data Governance and Privacy use case of the data fabric trial. Your goal is to control access to data across services in the data fabric.

The story for the tutorial is that Golden Bank has several departments that need access to high-quality customer mortgage data. As a Data Steward on the governance team, you will create data protection rules in order to protect confidential mortgage data.

In this tutorial, you will complete these tasks:

- 1. Create a data protection rule to deny access.
- 2. Create a data protection rule to mask data.

Preview the tutorial

Watch this video to preview the steps in this tutorial.

Prerequisites

Complete the Trust your data tutorial

ightharpoonup To preview this task, watch the video beginning at 00:43.

Complete the <u>Trust your data</u> tutorial to import and enrich data assets and publish them to a catalog.

Step 1: Create a data protection rule to deny access

ightharpoonup To preview this task, watch the video beginning at <u>01:01</u>.

A data protection rule controls access to a data asset. You can either mask data in the data asset or deny access to the data asset. Follow these steps to create a data protection rule to deny access to confidential information in some of the mortgage data assets.

- From the Cloud Pak for Data navigation menu, choose Catalogs > View all catalogs.
- 2. Open the Mortgage Approval Catalog.
- 3. Click the **CREDIT_SCORE** data asset. Notice that it contains the *confidential* tag. You will create a rule to deny access to this data asset.
- 4. From the Cloud Pak for Data navigation menu, choose **Governance > Rules**.
- 5. Click **Add rule > New rule**.
- 6. Select **Data protection rule**.
- 7. Click **Next**.
- 8. For the *Name*, type Confidential Information.
- 9. For the *Business definition*, type Rule to prevent unauthorized users from accessing data assets that have been tagged as confidential.
- 10. For *Condition 1*, select the following options.
 - Select Tag.
 - Select contains any.
 - Type confidential.
- 11. For the *Action*, select **deny access to data**.
- 12.Click **Create**. This rule will now deny access to data for anyone trying to access data assets that tagged as "Confidential". This rule applies in the Catalog Preview, Catalog Download, Data Refinery, and Project Asset preview. Note that the rule doesn't apply to the person who created the rule or added an asset to a catalog.

13. ₩ Watch the video at <u>02:20</u> to see what other users will see trying to access the CREDIT_SCORE data asset.

Step 2: Create a data protection rule to mask data

To preview this task, watch the video beginning at 02:28.

Some of the mortgage data assets include personal identifiable information which you need to protect, but the rest of the columns contains valuable information that should be available to a broader audience. That's where data masking comes in handy. Follow these steps to create a data protection rule that will mask data assets containing columns with a US Social Security Number.

- From the Cloud Pak for Data navigation menu, choose Catalogs > View all catalogs.
- 2. Click Mortgage Approval Catalog.
- 3. In the catalog, click the MORTGAGE_APPLICANTS_TRUST data asset.
- 4. Click the **Asset** tab to preview the data. Notice that one of the columns contains Social Security Numbers.
- 5. Click the **eye** icon for the *Social Security Number* column. Notice that this column was auto-assigned the *Social Security Number* business term. You will create a rule to mask this column.
- 6. From the Cloud Pak for Data navigation menu, choose **Governance > Rules**.
- 7. Click Add rule > New rule.
- 8. Select **Data projection rule**.
- Click Next.
- 10. For the *Name*, type Redact Social Security Number.
- 11. For the Business definition, type Rule to redact Social Security Number.
- 12. For Condition 1, select the following options:

- Select Business term.
- Select contains any.
- Start typing social, and then select Social Security Number.
- 13. For the Action, select **mask data**. Business term and Social Security Number will be filled in for you.
- 14. For the masking options, select **Redact**. This will replace the data with Xs. You can hover over each masking option to see example data masked using the selected option.
- 15.Click **Create**. This rule redacts columns with US Social Security Numbers in data assets.
- 16. ₩ Watch the video at <u>03:49</u> to see what other users will see accessing the MORTGAGE APPLICANTS data asset.

As a Data Steward on the governance team, you have learned how to create data protection rules in order to protect confidential mortgage data.

Next steps

You are now ready to know your data by evaluating, sharing, shaping, and analyzing data in the data fabric. See the Know your data tutorial.

Know Your Data Tutorial

Take this tutorial to work with your trusted and protected data with the Data Governance and Privacy use case of the data fabric trial. Your goal is to evaluate, share, shape, and analyze data in the data fabric.

The story for the tutorial is that Golden Bank has several departments that need access to high-quality customer mortgage data. As a Data Analyst, you will need to search for and find the right data, understand and trust its content, and then prepare it for other data analysts and data scientists to use.

In this tutorial, you will complete these tasks:

- 1. Understand data assets.
- 2. Enrich assets and create relationships.
- 3. Add enriched data to a project.
- 4. Visualize the data.
- 5. Prepare the data for analytics and AI.

Preview the tutorial

₹ Watch this video to preview the steps in this tutorial.

This video provides a visual method as an alternative to following the written steps in this documentation.

Prerequisites

 \blacksquare To preview this task, watch the video beginning at 00:39.

Complete the Trust your data and Protect your data tutorials:

 <u>Trust your data</u> tutorial to import and enrich data assets and publish them to a catalog. <u>Protect your data</u> tutorial to create data protection rules and masking flows to protect data.

Step 1: Understand data assets

ightharpoonup To preview this task, watch the video beginning at <u>01:12</u>.

Data assets in catalogs are much more than pointers to data. They contain information about the format and meaning of the data and statistics about the data values. Follow these steps to understand the value of data assets.

- From the Cloud Pak for Data navigation menu, choose Catalogs > View all catalogs.
- 2. Open the Mortgage Approval Catalog.
- 3. The featured assets section shows **Recently added** assets, assets that **Watson recommends** which are suggested assets from AI and machine learning based on your past usage and popularity, and **Highly rated** assets that catalog collaborators have rated and reviewed.
- 4. Click **Hide featured assets** to close that section.
- 5. Search for mortgage.
- 6. Click MORTGAGE_APPLICANTS_TRUST to view that catalog asset. The Overview tab provides basic information about the asset such as the description, a rating, tags, where the asset is located, business terms, data classes, and related assets.
- 7. Click the **Profile** tab. The profile information helps you understand the content, the quality, and usability of the data.
- 8. Scroll to the right to locate the **ZIP_CODE** column.
- 9. The data class that was automatically assigned to the *ZIP_CODE* column is *Commercial and Government Entity*, but the values are actually zip codes. You

can easily reclassify this column. Click the drop down list to see other possible data classes and their confidence levels. Select **US Zip Code**.

- 10.Click the **Asset** tab to see a preview of the data.
- 11.To view column metadata, click the **eye** icon for the *EMPLOYMENT_STATUS* column to see the assigned business terms. Click **Close** to close the column metadata window.

You explored the type of information that Watson Knowledge Catalog automatically adds to data assets during metadata enrichment. In the next step, you'll see how you can enrich data assets.

Step 2: Enrich assets and create relationships

 \blacksquare To preview this task, watch the video beginning at <u>02:51</u>.

You can make assets more valuable by adding information to them. For example, you can add your opinion of the asset, update asset properties, and create relationships to link assets. Follow these steps to enrich assets and create relationships.

- 1. For the MORTGAGE_APPLICANTS_TRUST catalog asset, click the **Review** tab.

 Rate and comment on this asset so that others can find the asset easily.
 - 0. Select **5 stars** for the rating.
 - 1. For the review, type This contains high quality customer data from the mortgage system.
 - 2. Click Submit.
- 2. Click the **Overview** tab.
- 3. To edit the asset name, click the **pencil** icon next to the asset name.
 - O. Change the name to MORTGAGE_APPLICANTS_TRUST_PROTECT.
 - 1. Click Apply.
- 4. In the *Description* section, click the **Edit** icon.
 - 0. Type Mortgage applicants from the Mortgage System.

- 1. Click Save.
- 5. Because this asset relates to mortgage loans, next to *Business terms*, click + (plus sign).
 - 0. Search for loan.
 - 1. Select Loan.
 - 2. Click Add.
- 6. Because this asset contains personal information, next to *Classifications*, click + (plus sign).
 - 0. Select Personally Identifiable Information.
 - 1. Click Add.
- 7. Because this asset is related to other mortgage assets, next to *Related assets*, click **Add asset**.
 - 0. Select **Is related to**, and click **Next**.
 - Select the CREDIT_SCORE and MORTGAGE_APPLICATION assets, and click Add.
- 8. Click MORTGAGE_APPLICATION to view that related asset.

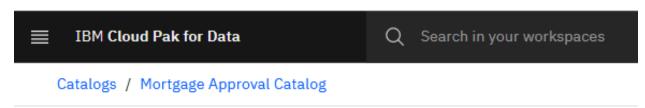
You've made these assets more valuable by reviewing, updating properties, and adding relationships to the assets.

Step 3: Add enriched data to a project

 \blacksquare To preview this task, watch the video beginning at <u>04:06</u>.

The data analysts team needs the mortgage applicants data in the mortgage analysis project to refine, visualize, analyze, and use as training data for models. Follow these steps to add the enriched data to a project.

1. Click Mortgage Approval Catalog in the navigation trail.



- 2. At the end of the MORTGAGE_APPLICANTS_TRUST_PROTECT catalog asset row, click the Overflow menu, and choose Add to project.
 - In the Target drop down list, select the Data Governance and Privacy project.
 - 1. Click Add.
- 3. When the notification displays, click **Go to project**. If you miss the notification, then:
 - Click the Cloud Pak for Data navigation menu, choose Projects > View all projects.
 - 1. Click the **Data Governance and Privacy** project.
- 4. In the project, click the **Assets** tab to see the MORTGAGE_APPLICANTS_TRUST_PROTECT data asset.

Step 4: Visualize the data

 \blacksquare To preview this task, watch the video beginning at 04:33.

You need to cleanse and refine the mortgage applicants data to get it ready for your analytical tools and models. A quick and easy way to determine how it needs to be shaped is to visualize the data in Data Refinery. Note that the visualization is based on the first 5,000 rows of the data. Follow these steps to visualize the data.

- Click the MORTGAGE_APPLICANTS_TRUST_PROTECT data asset to preview the data.
- 2. Click **Refine** to open the data asset in Data Refinery, and wait for the data to be read and processed. **Note:** If this is your first time accessing Data Refinery, you may see a guided tour asking if you want to tour. For now, click **Maybe later**.
- 3. In the *Information* panel, click the **X** to close the panel.
- 4. In the *Steps* panel, click the **X** to close the panel.
- 5. Click the **Visualizations** tab.
- 6. For the Column to visualize, select **EMPLOYMENT_STATUS**.
- 7. Click Visualize data. The tool selects a pie chart as the best chart type for this column which shows the distribution of applicants by employment status.
 Notice that there are several suggested chart types indicated by a blue dot next to bar, word cloud, and sunburst.
- 8. For the *Chart type*, select the **Bubble** chart type. The Bubble chart is one easy way to quickly visualize the distribution of values in a particular dataset.
- 9. From the *Chart type* drop-down, select the **Relationship** chart type.
- 10. This chart type requires two columns. Select these columns:
 - For the Column field, select EMPLOYMENT_STATUS.
 - 1. Click Add another column.
 - 2. For the second *Column*, select **EDUCATION**.

11. With the *Relationship* chart, you can select endpoints to see the relationships. For example, you can see applicants employment status by level of education.

You are now ready to cleanse the data.

Step 5: Prepare the data for analytics and AI

 \blacksquare To preview this task, watch the video beginning at <u>05:53</u>.

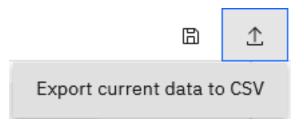
You can't process applicants without a social security number, so you need to review the data and remove any applicants without social security numbers. To prepare the MORTGAGE_APPLICANTS_TRUST_PROTECT data, you will:

- View the frequency of values in the Social_Security_Number column.
- Filter the applicants with missing values from the Social_Security_Number column.

Follow these steps to prepare the data.

- 1. In the Data Refinery, click the **Profile** tab.
- 2. Scroll to the right to locate the *Social_Security_Number* column. Notice that there are several missing values.
- 3. Click the **Data** tab to filter out these records. Notice at the bottom of the screen, Data Refinery indicates that the *FULL DATA SET* is 1101 rows.
- 4. If the *Steps* panel is not visible, click **Steps** to open the panel.
- 5. Click **New step**.
 - 0. In the *Cleanse* section, select **Filter**.
 - 1. In the *Column* field, select the **Social Security Number** column.
 - 2. In the *Operator* field, select **Is not empty**.

- 3. Click **Apply**. Notice at the bottom of the screen, Data Refinery now indicates that the *FULL DATA SET* is 1000 rows because the rows with missing Social Security Numbers have been filtered out. Notice that a new step displays in the *Steps* panel showing the *Filter* operation.
- 6. Click the **Profile** tab.
- 7. Scroll to the right to locate the *Social_Security_Number* column. Notice that the missing values are gone.
- 8. From the toolbar, click the Save icon.
- From the toolbar, click the Export icon, and choose Export current data as CSV.



- Save the MORTGAGE_APPLICANTS_TRUST_PROTECT_shaped.csv to a local folder.
- 1. Navigate to that folder, and open the CSV file which contains 1000 rows and no applicants are missing the social security number.
- 10.Return to Cloud Pak for Data as a Service, and click the **Data Governance and Privacy** project in the navigation trail.



11.Click *All assets*, and locate the new Data Refinery flow asset with the name *MORTGAGE_APPLICANTS_TRUST_PROTECT_flow*.

As a Data Analyst for Golden Bank, you have learned how to search for and find the right data, understand and trust its content, and then prepare it for other data analysts and data scientists to use.