

Informatica® Cloud Application Integration March 2025

Automobile Insurance Claim Processing with Google Gemini

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Preface

Use Automobile Insurance Claim Processing with Google Gemini to learn how to evaluate a claim request, assess the vehicle damage, and estimate the insurance payout based on the uploaded images. This guide assumes that you have an understanding of the Gemini Connector and Email Connector concepts.

CHAPTER 1

Introduction to Automobile Insurance Claim Processing with Google Gemini recipe

The Automobile Insurance Claim Processing with Google Gemini recipe is based on REST and SOAP APIs. Use the recipe to evaluate a claim request, assess the vehicle damage, and estimate the insurance payout based on the uploaded images.

The recipe facilitates the entry of necessary details into the incident claim form, allowing you to upload up to five images with a total size limit of 5 MB. It is recommended to upload photos of the damaged vehical from all sides for the Large Language Model (LLM) to work better.

Upon submission, the process generates a claim ID and initiates vehicle verification by validating the provided information against the dataset. After successful validation, the process retrieves a sample price list and part details corresponding to the selected vehicle.

The process then checks the image format before proceeding with damage recognition using the specified LLM. This model assesses the extent of damage, categorizing it as either simple or complex. LLM recognizes damage only from the list of supported parts. If the damaged parts are not in the list, LLM returns the damage level as complex.

For simple damage levels, the LLM provides a list of damaged parts, and the process calculates an approximate payout.

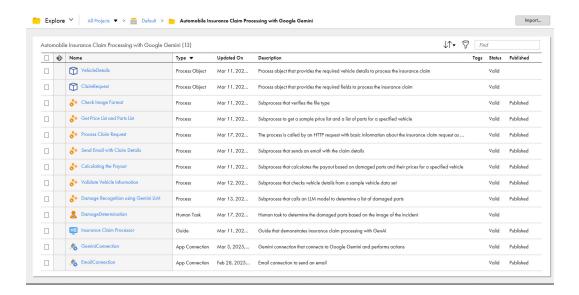
For complex damage levels, the application undergoes further review to determine the list of damaged parts based on the uploaded images. An email containing the images and claim information is sent to the reviewer.

After the reviewer's assessment, the process calculates the approximate payout and sends an email to the specified recipient with the payout details.

Automobile Insurance Claim Processing with Google Gemini recipe contents

The recipe contains multiple assets, such as process objects, app connections, human task, processes, and a quide.

The following image shows the assets that the Automobile Insurance Claim Processing with Google Gemini recipe package contains:



Automobile Insurance Claim Processing with Google Gemini recipe assets

The following table lists the assets that the Automobile Insurance Claim Processing with Google Gemini recipe package contains:

Asset Name	Asset Type	Description
VehicleDetails	Process object	Provides the required vehicle details to process the insurance claim.
ClaimRequest	Process object	Provides the required fields to process the insurance claim.
GeminiConnection	App connection	Gemini connection that connects to Google Gemini and performs actions.
EmailConnection	App connection	Email connection to send an email.
Check Image Format	Process	Subprocess that verifies the file type.
Get Price List and Parts List	Process	Subprocess to get a sample price list and a list of parts for a specified vehicle.
Send Email with Claim Details	Process	Subprocess that sends an email with the claim details.
Calculating the Payout	Process	Subprocess that calculates the payout based on damaged parts and their prices for a specified vehicle.
Validate Vehicle Information	Process	Subprocess that checks vehicle details from a sample vehicle data set.
Damage Recognition using Gemini LLM	Process	Subprocess that calls an LLM model to determine a list of damaged parts.

Asset Name	Asset Type	Description
Process Claim Request	Process	The process is called by an HTTP request with basic information about the insurance claim request as an incoming parameter. The process generates a claim ID and then performs initial vehicle verification by validating information from the data set. After successful validation, the process gets a sample price list according to the chosen vehicle. The process then validates the image format and performs damage recognition using the specified LLM model. If the damage level is simple, the process performs calculations for an approximate payout for the compensation. If the damage level is complex, the application is sent for review to determine the list of damaged parts associated with the claim based on the applicant's uploaded images. Based on the reviewer's decision, the process also performs calculations for the approximate payout for the compensation and sends a message to the specified email address with the approximate compensation price.
DamageDetermination	Human task	Determines the damaged parts based on the image of the incident.
Insurance Claim Processor	Guide	Demonstrates insurance claim processing with GenAl.

CHAPTER 2

Using the Automobile Insurance Claim Processing with Google Gemini recipe

To use the Automobile Insurance Claim Processing with Google Gemini recipe, you must perform the following steps manually:

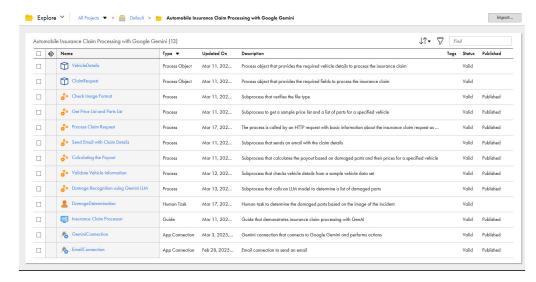
- 1. Copy and access the recipe.
- 2. Configure and publish the Gemini connection.
- 3. Configure and publish the Email connection.
- 4. Publish the processes.
- 5. Publish and run the guide.

Step 1. Copy and access the recipe

Copy the pre-configured assets in the recipe to a separate project or folder.

- 1. Open the Automobile Insurance Claim Processing with Google Gemini recipe and click Use.
- 2. Select the location where you want to copy the recipe, and then click Continue.
- In the Copying the recipe dialog box, click OK.
 It might take some time for the recipe to get copied. You will receive a notification when the recipe is ready for use.
- 4. After the recipe is copied, click **Explore** to access the recipe content.

5. Navigate to the project or folder where you copied the recipe or enter the recipe name in the **Find** box. All the assets in the recipe are displayed as shown in the following image:



Step 2. Configure and publish the Gemini connection

Configure the API key in the GeminiConnection connection, and then publish the connection.

- 1. Open the GeminiConnection connection.
- 2. From the Runtime Environment list, select Cloud Server or any Secure Agent.
- 3. In the **Connection Properties** section, enter the API key in the **API_Key** property. The **API_Key** property authenticates Gemini connection requests.
- 4. Save and publish the connection.

Step 3: Configure and publish the Email connection

Configure the authentication details in the EmailConnection connection, and then publish the connection.

- 1. Open the EmailConnection connection.
- 2. From the Type list, select IICS Cloud Application Integration Email Service (Licensed for use).
- 3. From the Runtime Environment list, select Cloud Server or any Secure Agent.

- 4. From the **Authentication Type** list, select **Password** or **OAuth** as needed. Based on the authentication type selected, perform one of the following steps:
 - For **Password** authentication, enter values for the following properties in the **Connection Properties** section:

Property	Description
Authentication	Select Enable . Email Connector authenticates the user name and password that you enter in the email connection properties.
User Name	User name to log in to the email server. The user name is either the account name or the email address that is used to send the email with the synchronization results. For example: notifyme@mydomain.com
Password	Password for the email address. Set an API key for your email account. For information about creating an API key, see Create API credentials .
Security	Select SSL for the Email connection to use the SSL protocol.

Configure the following common properties on the connection creation page:

Property	Description
Host	Email server's DNS name, such as mail.mydomain.com, or an IP address, such as 192.168.1.1.
Port	Port for communication between the Process Server and the email server. Default is 25 .

• For **OAuth** authentication, enter values for the following properties in the **Connection Properties** section:

Property	Description
Authorization URL	Enter the OAuth authorization URL for the email service that is used to authorize the user request.
	For example: https://login.microsoftonline.com/xxxxxx-xxxx-xxxx-xxxx-xxxx-xxxx-xxxx-
Token Request	Enter the OAuth token request URL that handles token requests.
URL	For example: https://login.microsoftonline.com/xxxxxxxxx-xxxx-xxxx-xxxx-xxxxx-xxxx/oauth2/v2.0/token
	The refresh token expires in 90 days. The user must authenticate again and publish the connection before the token expires.
Client ID	Specify the identifier value from the OAuth provider.

Property	Description
Client Secret	Enter the client secret to connect to the email application.
Scope	Specify the scope. The scope in OAuth authentication limits an application's access to a user's account. You can select multiple scopes for a single client. To enter multiple scopes, separate each value with a space.
	For a Microsoft Outlook email account, enter the following scope:
	https://outlook.office.com/SMTP.Send offline_access

Configure the following common properties on the connection creation page:

Property	Description
Host	Email server's DNS name, such as mail.mydomain.com, or an IP address, such as 192.168.1.1.
Port	Port for communication between the Process Server and the email server. Default is 25 .

5. Save and publish the connection.

Step 4. Configure and publish the processes

Configure the vehicle details, LLM model ID, and generation configuration details, and then publish the processes.

- 1. Open the Validate Vehicle Information process.
- 2. On the **Assignments** tab of the Save Sample Vehicle Dataset step, in the **VehicleDataset** field, you can change the vehicles data or add an HTTP request to get external data.
- 3. Save and publish the process.
- 4. Open the Get Price List and Parts List process.
- 5. On the **Assignments** tab of the Save Sample Price Dataset step, in the **PriceDataset** field, you can change the vehicles parts price list or add an HTTP request to get external data.
- 6. Save and publish the process.
- 7. To publish the **Check Image Format** process, click **Actions** in the row that contains the process and select **Publish**.
- 8. Open the Damage Recognition using Gemini LLM process.
- 9. On the **Temp Fields** tab of the Start step, in the **Retry** field, you can change the value to increase the number of attempts to call the LLM model if error an occurs. By default, it is set to 1.

- 10. On the Assignments tab of the Prompt Request step, configure the following properties:
 - 1. Update the **GenerationConfig** field using the Expression Editor, as shown in the following sample code:

For the **GenerationConfig** field, enter values for the following properties:

temperature	Controls the randomness of the model's output. A lower value makes the output more deterministic, while a higher value increases randomness and creativity. For example, a temperature of 0.5 balances between deterministic and creative outputs.
maxOutputTokens	Defines the maximum number of tokens the model can generate in its response. Setting a limit ensures that the response is concise and fits within the desired length constraints.
topP	Determines the cumulative probability threshold for token selection. The model considers the smallest set of tokens whose cumulative probability meets or exceeds topP. For example, if topP is set to 0.1, the model considers only the top 10% most probable tokens at each step.

- 2. Enter the LLM model ID in the LLM_Model field.
- 11. Save and publish the process.
- To publish the Calculating the Payout process, click Actions in the row that contains the process and select Publish.
- To publish the Send Email with Claim Details process, click Actions in the row that contains the process and select Publish.
- To publish the Process Claim Request process, click Actions in the row that contains the process and select Publish.

Step 5: Publish and run the guide

After you enter the vehicle details and upload the image, the recipe evaluates the claim request, assesses the vehicle damage, and estimates the insurance payout based on the uploaded images.

- 1. Open the Insurance Claim Processor guide.
- 2. On the Start tab of the Start step, ensure that the Run As field is set to Current User.
- 3. Save and publish the guide.
- 4. On the **Actions** menu, click **Run**. Alternatively, you can copy the execution URL from the **Properties Details** dialog box to run the guide.
- 5. On the **Instructions** page, enter the email ID of the agent, vehicle details or the Vehicle Identification Number (VIN) code, and upload a maximum of five incident images with a total size limit of 5 MB.

6. Click Continue.

If the damage level is simple, the process performs calculations for an approximate payout for compensation. You will receive information, such as claim ID, total payout, and list of damaged parts.

If the damage level is complex, the application is sent for review to determine the list of damaged parts associated with the claim based on the applicant's uploaded images. The reviewer can assess the damage in complex cases by initiating the relevant task in Human Task and supplying a commaseparated list of parts. In this case, you will receive a claim ID.

You can also use the embed code to embed the guide into an HTML document of a third-party application.