

Automating Invoice Reporting with UiPath Web Studio

Created By:

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Automating Invoice Reporting system with UiPath Web Studio

Using:

- UiPath Web Studio
- Document Understanding
- GenAI Content Generation
- Google Drive
- Google Sheets

Problem: The Efficiency Gap

Current Challenge: Your company works with multiple suppliers and receives invoices every week. Finance managers need to keep track of which invoices are coming due, but they don't have time to open and read every document.

Current Manual Process

- Open every invoice manually
- Read invoice details
- Copy data into spreadsheets
- Create purchase summaries manually
- Track due dates

Critical Inefficiencies

- Time-consuming
- Human errors
- Missed due dates
- Difficult to scale
- No automated validation

Automated AI Solution

An AI-powered system identifying invoices due by **22 September 2025**. It generates organized reports with AI descriptions, providing finance managers instant visibility without manual review.



Seamless Data Access

Reads and extracts data from Google Drive automatically.



AI Purchase Summaries

Uses GenAI to describe purchases for quick visibility.



Automated Reporting

Writes results directly into organized Google Sheets.

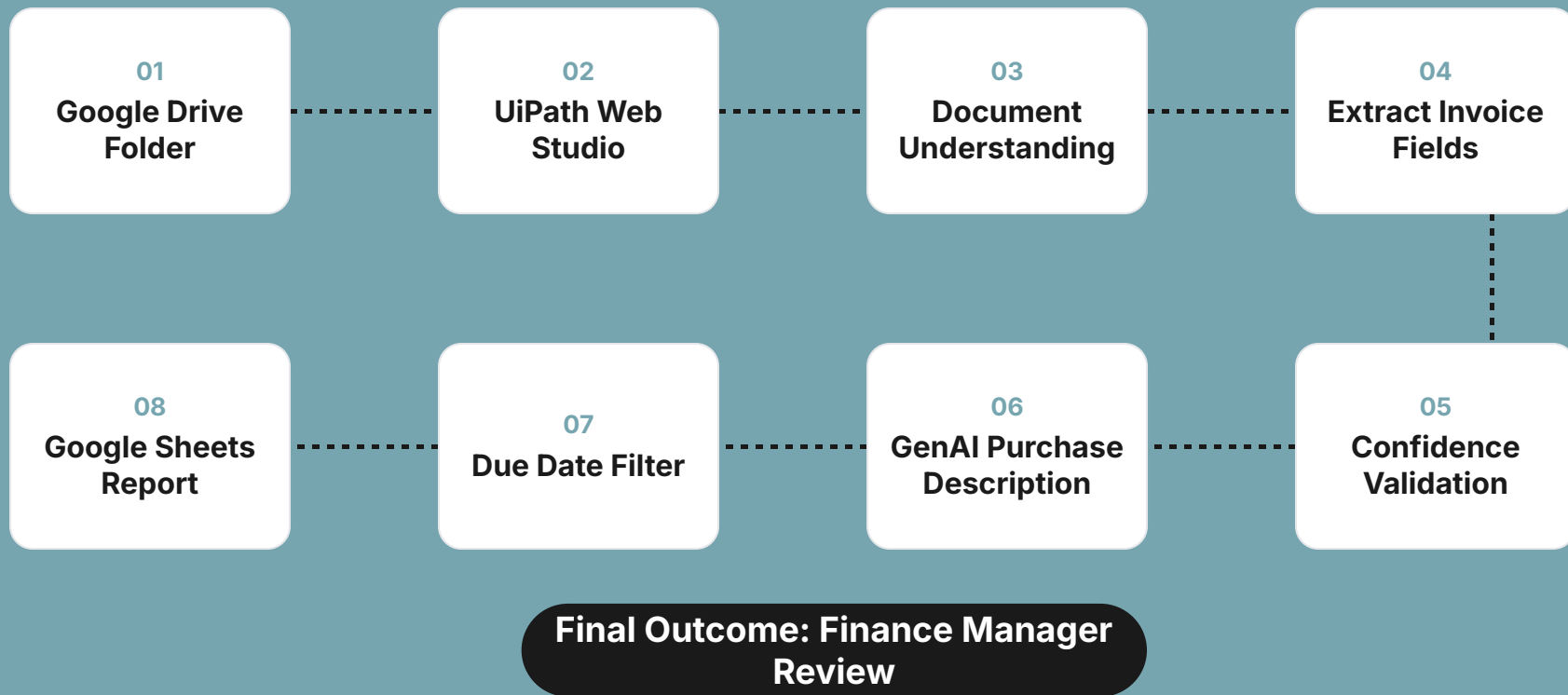


Confidence Validation

Flags low-confidence extractions for manual review.

Target Date Filter: All invoices due by 22 September 2025

RPA Workflow Journey



Tools & Technologies Used

Technologies Tool

Purpose

UiPath Studio Web



Build automation workflow

Google Drive



Store invoice files

Google Sheets



Store reporting data

Document Understanding



Extract invoice fields

GenAI Content Generation



Create purchase summaries

Log Message Activity



Flag low-confidence results

Step 1: Google Spreadsheet Setup

Objective

Create a structured Google Sheet to organize and track processed invoice information automatically.

Required Columns:

- Invoice Number
- Supplier
- Due Date
- Total Amount
- Purchase Description

Each row provides Finance managers with clear reporting and AI-generated summaries of purchases.

Spreadsheet Preview

Step 2: Google Drive Folder Setup

Objective

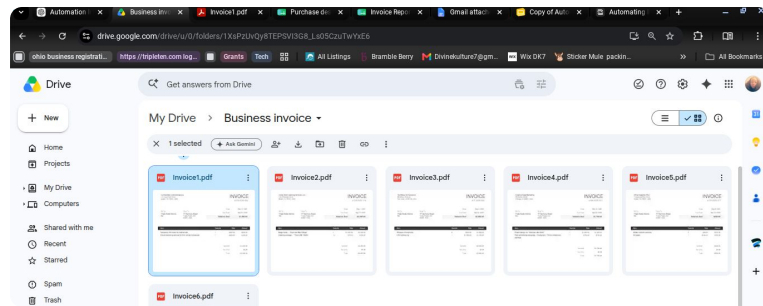
Store all invoice files in a dedicated folder within Google Drive so the UiPath automation workflow can automatically access, read, and process each invoice.

Key Benefits:

- Efficient data extraction
- Automatic purchase descriptions
- Hands-free Google Sheet updates
- Elimination of manual file handling

How UiPath Works

- 1. Retrieve:** Gathers files from designated Drive folder.
- 2. Scan & Read:** Automatically reads each invoice file.
- 3. Process:** Uses Document Understanding and AI.
- 4. Extract:** Identifies supplier, date, and amount.



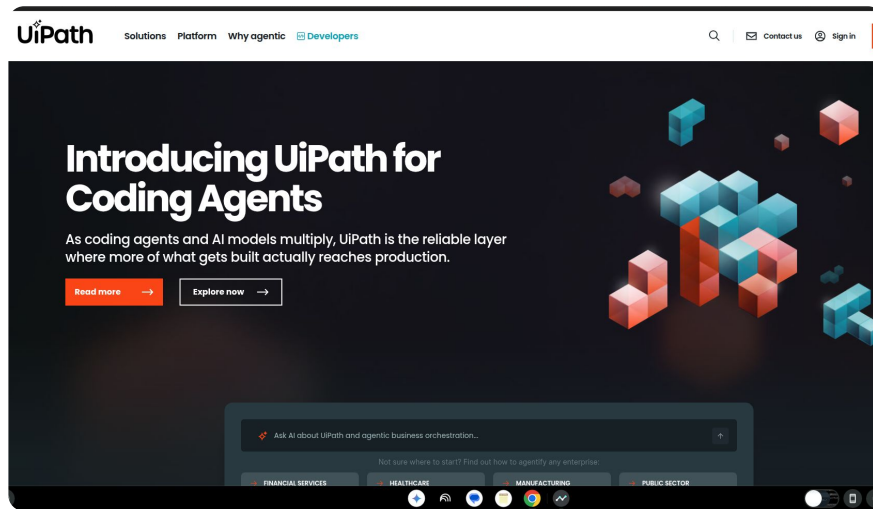
Get Started with UiPath

To begin your automation journey, visit the **UiPath Official Website** and create a free account.

Gain access to **UiPath Studio Web**, a powerful cloud-based platform for building RPA and AI-driven workflows.

UiPath's tools allow you to automate complex business processes and workflows with ease.

<https://www.uipath.com/>



After logging into **UiPath Studio Web** and setting up your account, choose **Studio** to start creating processes. Next, click the **Create New** dropdown and select **RPA Workflow** to begin building your automated invoice reporting workflow.

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Studio Build processes, workflows, and agents in a no-code canvas.

Agents Manage the full lifecycle of intelligent agents — from creation and deployment to ongoing monitoring, optimization, and incident...

Maestro Orchestrate automated processes across systems.

Orchestrator Centrally manage and monitor robots and automation resources.

Orchestrator services

What's New
Build, manage, and scale system-to-system integrations with API Workflows.
[Read the user guide](#)
Agents now support file handling, in public preview.
[Release notes](#)
Meet a new class of UiPath agents that engage in multi-turn, real-time conversations.
[Now in public preview](#)

Name	Content	Edited	Status	
Solution 7	1 project	8 seconds ago	Draft	Agent Process Agent RPA Workflow API Workflow App Import
Solution 6	1 project	32 minutes ago	Draft	
Solution 4	1 project	8 hours ago	Draft	
Solution 3	1 project	13 hours ago	Draft	
Solution 5	1 project	13 hours ago	Draft	
Solution 1	1 project	1 day ago	Draft	
Solution	1 project	1 day ago	Draft	

UiPath Studio Web

A browser-based development environment within the UiPath cloud automation platform.

Enables users to design, test, and deploy automations directly from a web browser without installing desktop software.

Serves as an accessible, low-code starting point for both business users and professionals.

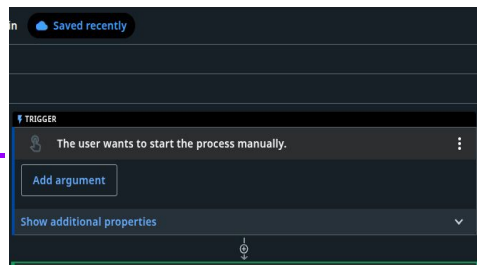
Connect Google Workspace

Click the small + icon at the bottom of the workflow canvas and search for **For Each File or Folder** under Google Workspace activities.

Once selected, authorize your Google account to grant UiPath access to:

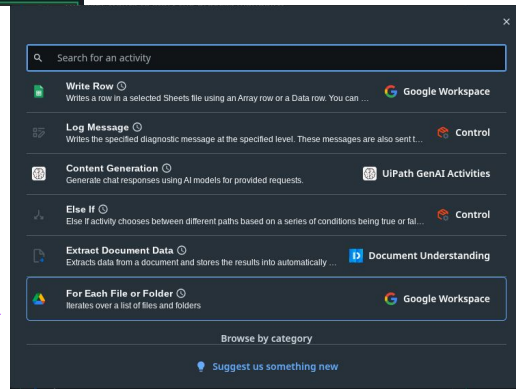
- **Gmail account**
- **Google Drive folder**

This allows the automation to read and process invoice files directly from your Drive.



Step1: Locate small + icon at the bottom of the workflow canvas

Step 2: Locate Activity
search for **For Each File or Folder** under Google Workspace activities.



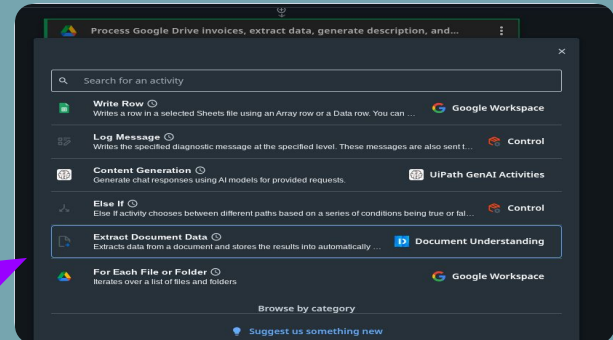
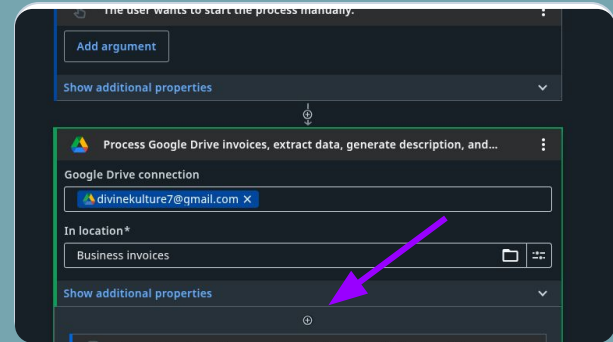
Extract Document Data Activity

After granting permissions, click the + icon and select **Extract Document Data** under Document Understanding activities.

This AI-powered activity automatically reads and extracts structured information from invoices and business documents, such as:

- **Invoice Number**
- **Supplier**
- **Due Date**
- **Total Amount**

Instead of manual entry, the AI recognizes relevant fields and converts unstructured text into organized, actionable data.



Configure Extract Document Data

1. Initial Configuration

Set Input to **CurrentItem** to process files in the loop.

2. Document Selection

Under **Document Understanding Project**, choose:

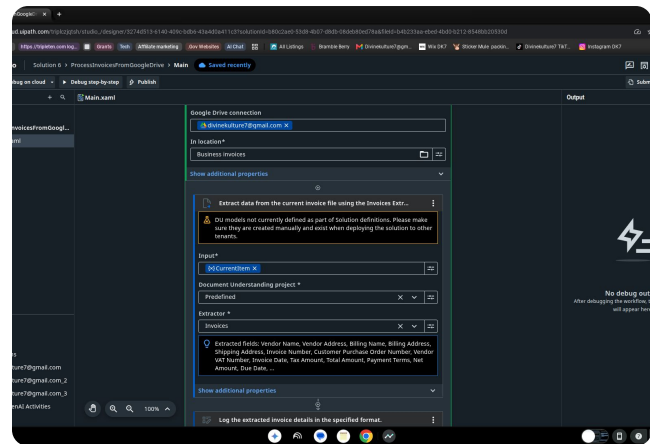
- **Predefined** (Ready-made AI models)
- **Extractor → Invoices**

3. Automated Extraction

The Invoices extractor automatically identifies:

- Invoice Number & Supplier
- Due Date & Total Amount

Once selected, UiPath displays a preview of extracted structured data.



Pro Tip: Manual Check

If the **Extractor** is not set by default, manually select **Extractor → Invoices** to ensure correct AI processing.

Accessing Extracted Data

Use the arrow on the right side of the activity to expand the **Output** section and access extracted **Document Understanding** data.

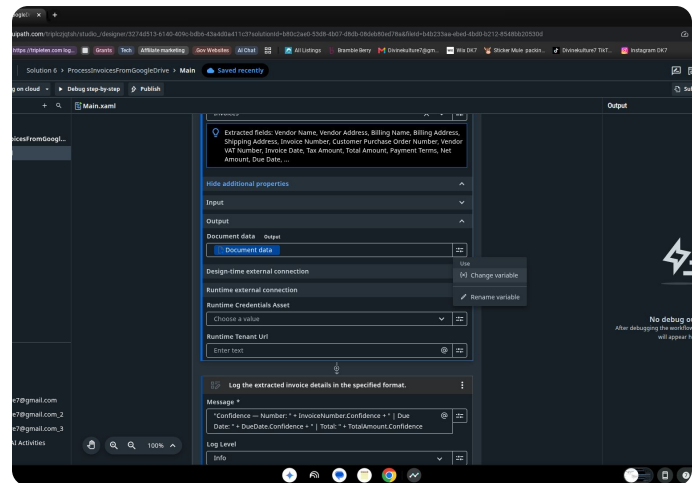
Mapped Invoice Values:

- Invoice Number
- Supplier
- Due Date
- Total Amount

Downstream Applications:

Extracted structured fields can be utilized throughout the workflow for:

- Workflow validation & logging warnings
- AI-generated summaries & filtering
- Writing results into Google Sheets



Integration Tip

The Output section is where you connect AI extraction results to your business logic and external applications like Google Sheets.

Confidence Validation

1. Confidence Check Logic

Business Rule

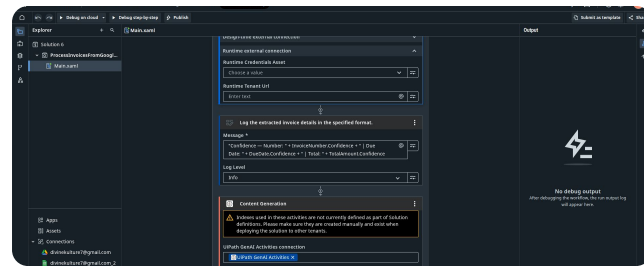
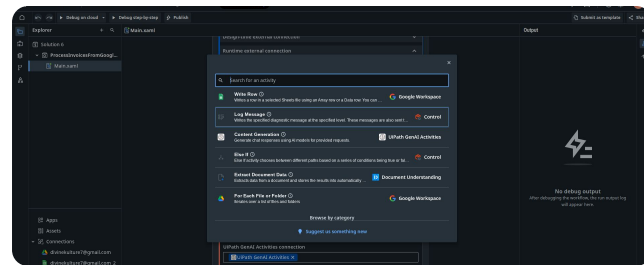
The workflow validates extracted fields, primarily the **Invoice Number**, to determine if human review is needed.

- **High Confidence (> 0.9):** Extracted value is trusted; no manual review.
- **Low Confidence (< 0.7):** Triggers a warning for manual human review.

Implementation

Add a **Log Message** activity. In the Message field, enter:

```
"Confidence - Number: " + InvoiceNumber.Confidence +  
" | Due Date: " + DueDate.Confidence +  
" | Total: " + TotalAmount.Confidence
```



Low Confidence Warning

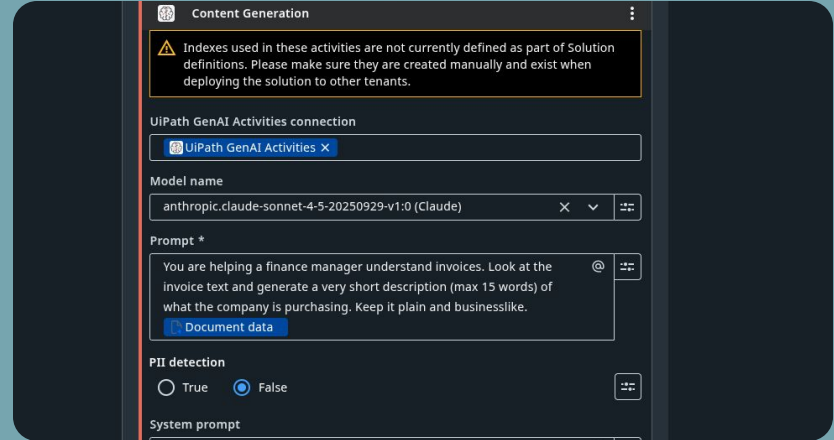
"Invoice requires manual check: low confidence on the invoice number."

AI Purchase Description

1. Activity Setup

Click the small + icon at the bottom of the workflow canvas add **Content Generation** activity:

- **Connection:** UiPath GenAI Activities
- **Model:** Claude-sonnet-4-5



2. Prompt Configuration

"You are helping a finance manager understand invoices. Look at the invoice text and generate a very short description (max 15 words) of what the company is purchasing..."

<[documentData]>

3. Parameters

PII Detection: **False** | Remaining: Default

✨ Example AI Outputs

- "Office laptop purchase"
- "Software licensing renewal"
- "Stage rental and catering services"

Results are written directly to Google Sheets for instant context.

Implementation: Confidence-Based Validation

Technical Implementation

Add an **Else If** condition after extraction:

```
documentData.InvoiceNumber.Confidence < 0.7
```

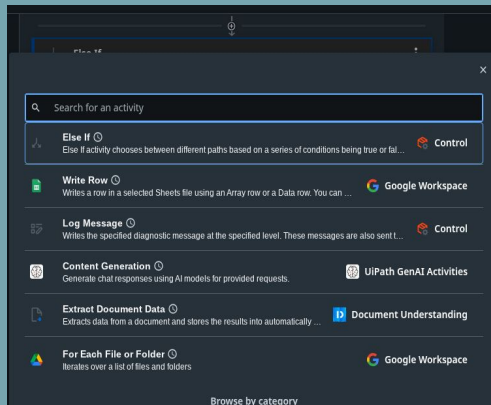
Log Message: "Invoice requires manual check: low confidence on the invoice number."

Business Rule

The workflow evaluates AI extraction confidence to determine if manual review is required.

High Confidence (> 0.9): Trusted; processed automatically.

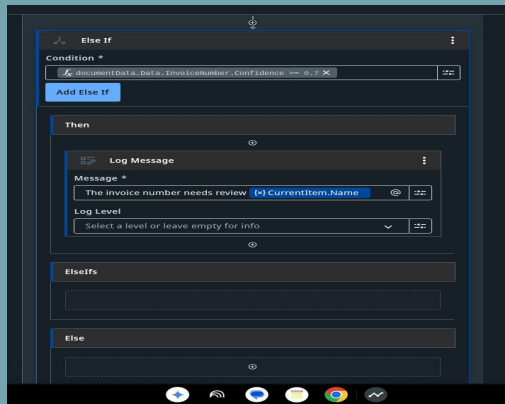
Low Confidence (< 0.7): Triggers manual human review.



Why This Matters

AI extraction is powerful but not infallible. Manual review triggers when invoices have:

- Blurry or low-quality text
- Non-standard or unusual layouts
- Missing critical information
- Formatting inconsistencies



Key Benefits

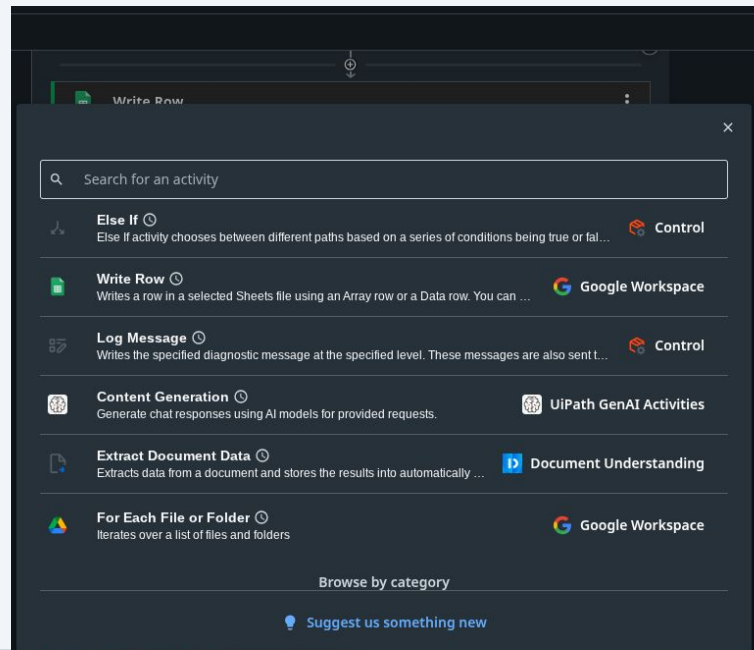
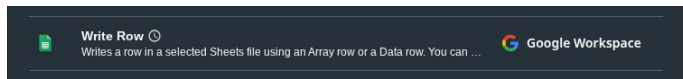
Prevents incorrect data from entering downstream systems (e.g., Google Sheets), ensuring a reliable, human-in-the-loop automation process.

Automated Data Logging

Activity Setup

Click the small + icon under else at the bottom of the workflow and select **Write Row** under Google Sheets activities.

This activity automatically sends extracted invoice data into your report, writing one complete row per invoice processed.



How It Works

- Reads invoices from Google Drive
- Uses AI to extract and describe data
- Automatically writes data row by row

"This creates a clean, organized invoice report without manual data entry."

Configuration: Finalizing the Report

Why It Matters

The **Write Row** activity is the final reporting step. It transforms raw invoice data into an organized Finance report for instant managerial review.

Mapping Logic

Tells automation where extracted values belong:

- Invoice # → Col A
- Vendor → Supplier Col
- AI Summary → Purchase Desc

Key Configuration

Spreadsheet: Select Google Sheet

Range: Choose worksheet tab

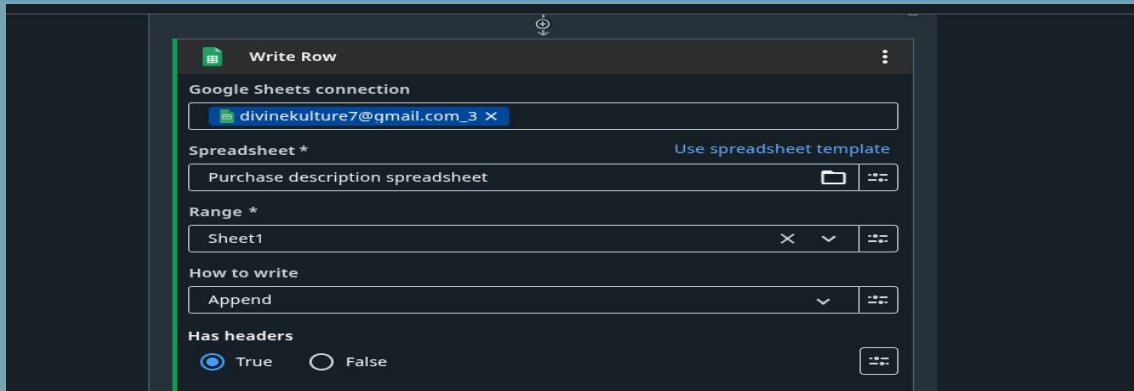
How to write: Set to "Append"

Has Header: True

(In spreadsheets or data tables, "**Has Header**" means the first row contains column names or labels instead of actual data.)

*"Append" means every processed invoice is added as a **new row** at the bottom instead of replacing data.*

Allows the report to grow continuously as invoices are processed.



Write row Mapping Continued

Spreadsheet Column	Mapped Data
Invoice Number	Document data → Invoice number
Supplier	Document data → Vendor name
Due Date	Document data → Due date
Total Amount	Document data → Total amount
Purchase Description	Document data → Items / AI description

The screenshot shows a configuration window for a Google Sheets connection. The interface is dark-themed with light blue and grey accents. It includes a header for the connection, a list of mapped spreadsheet columns, and various settings for how the data is written to the sheet.

Google Sheets connection

divineculture7@gmail.com_3 ✕

Spreadsheet * Use spreadsheet template

Purchase description spreadsheet

Range *

Sheet1 ✕ ▾

How to write

Append ▾

Has headers

☒ True ☐ False

What to write

Individual Fields ▾

Invoice Number

Document data Data Invoice number ✕

Supplier

Document data Data Vendor name ✕

Due Date

Document data Data Due date ✕

Total Amount

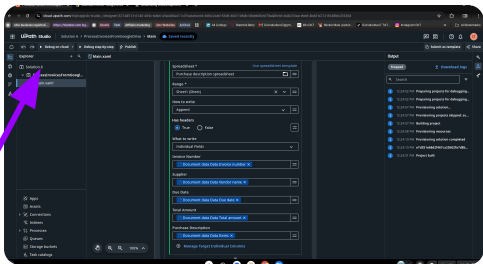
Document data Data Total amount ✕

Purchase Description

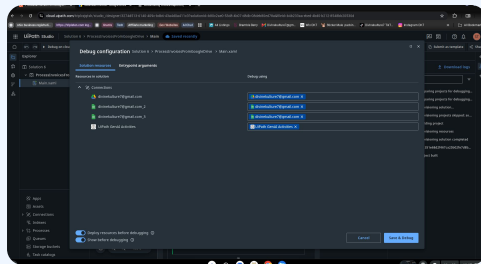
Document data Data Items ✕

Testing & Debugging the Workflow

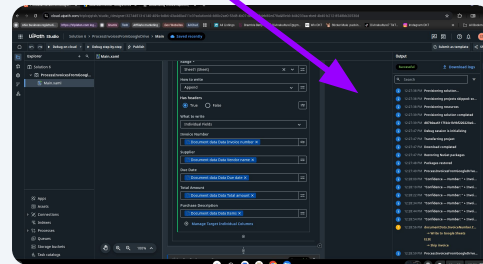
Once everything is entered, test the workflow by selecting the **Debug on Cloud** button. The automation executes, and step-by-step output is displayed on the right for monitoring and error identification. Successful outputs are automatically added to the spreadsheet.



Step 1: Debug on cloud



Step 2: Save & Debug



Step 3: Output successful

Monitor & Validate in Real-Time

Automated Data Logging

The solution integrates **UiPath Web Studio** with **Google Workspace** to automate data flow directly into spreadsheets, ensuring real-time updates and high-accuracy data management.

Field Mapping

The automation maps extracted document fields to specific spreadsheet columns:

Invoice Number → Column A
Vendor Name → Column B
Total Amount → Column C
Description → Column D

The screenshot shows a Google Sheet with the following data:

Tr	Invoice Number	Tr	Supplier	Due Date	Total Amount	Purchase Description
2	CH-2025-552		ConnectNet Communications	9/30/2025	\$1,200.00	System.Collections.Generic.List`1[UiPath.IntelligentOCR.StudioWeb.Activities.SWEntities.ExtendedE
3	CR-2025-118		Camp Rock Catering Services LLC	9/15/2025	\$2,250.00	System.Collections.Generic.List`1[UiPath.IntelligentOCR.StudioWeb.Activities.SWEntities.ExtendedE
4	IT-2025-044		TechNova AV Solutions	9/20/2025	\$2,950.00	System.Collections.Generic.List`1[UiPath.IntelligentOCR.StudioWeb.Activities.SWEntities.ExtendedE
5	MK-2025-301		Creative Edge Marketing	9/22/2025	\$1,750.00	System.Collections.Generic.List`1[UiPath.IntelligentOCR.StudioWeb.Activities.SWEntities.ExtendedE
6	OF-2025-077		Office Supplies Plus	9/18/2025	\$430.00	System.Collections.Generic.List`1[UiPath.IntelligentOCR.StudioWeb.Activities.SWEntities.ExtendedE

Workflow Result

"This creates a clean, organized invoice report without manual data entry, providing instant context for finance managers."

Seamless Data Flow & Real-time Reporting

Final Outcome

The automation workflow successfully completed all project objectives:



Data Acquisition

Read invoices directly from Google Drive folders.



Data Extraction

Extracted structured invoice data using OCR.



AI Enrichment

Generated smart AI purchase descriptions.



Error Handling

Logged low-confidence warnings for review.



Smart Filtering

Filtered invoices based on specific due dates.



Automated Reporting

Created a dynamic Finance reporting sheet.

Seamless End-to-End Invoice Automation

Overall Business Impact

The automation reduced repetitive manual work, improved reporting accuracy, and saved Finance managers significant time.



Efficiency Gained

Instead of spending hours reviewing invoices individually, managers can now instantly view organized invoice reports.



AI Enrichment

Integrated AI-generated summaries and automated error warnings for a smarter workflow.

A faster, smarter, and more scalable invoice reporting process.

Conclusion — Before vs After Automation

Before Automation

The invoice reporting process was completely manual.

- Opening each invoice individually
- Manual data entry into spreadsheets
- Repetitive and prone to human error
- Inefficient tracking of due dates
- Difficult to scale with volume

After Automation

UiPath Studio Web transformed the workflow into a scalable system.

- **Automated Extraction:** Document Understanding reads invoices from Google Drive.
- **AI Enrichment:** GenAI creates smart purchase descriptions.
- **Smart Logic:** Automatically filters by due date.
- **Speed & Accuracy:** Improved processing and instant visibility.

Smarter, Faster, and More Scalable

Reflection & Key Learnings

Technical Skills

- Built automation workflows using **UiPath Web Studio**
- Applied **Document Understanding** for financial data extraction
- Integrated **GenAI** to enhance decision-making
- Automated tasks across **Google Workspace**

Business Value

Scalable and reliable workflows that:

- Save significant processing time
- Reduce human errors
- Improve accuracy & consistency
- Enable focus on strategic work

Overall Reflection

Gained technical expertise and a deeper understanding of measurable business impact.

Reinforced the importance of combining automation, AI, and process optimization for better business outcomes.

Bridging Technology and Strategy with Automation