

Assignment 3: AI-Powered Calculation plugin for Excel Processing Applications

This assignment is an AI-powered calculation plugin designed for seamless integration into Microsoft Excel, LibreOffice Calc, and Google Sheets as an add-in. The application enhances the processing experience by enabling users, particularly students, to customize the prompts directly within their preferred excel processing environment.

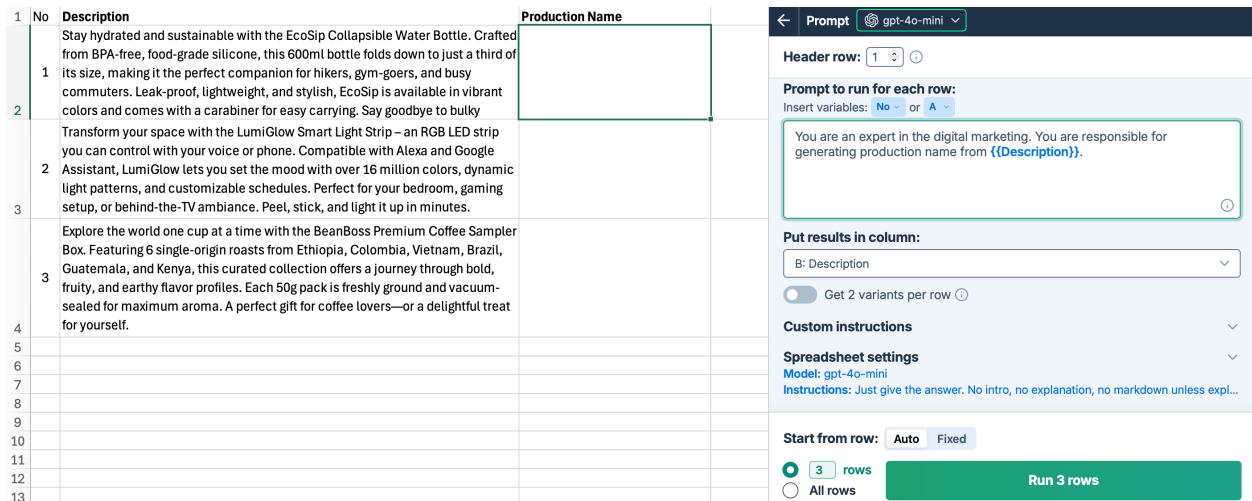


Figure 1. Illustration for the plugin/extension.

Key Features:

- 1. Multi-Platform Support:** Available as an add-in for Microsoft Excel, LibreOffice Calc, and Google Sheets, allowing students to choose their preferred platform.
- 2. Sidebar-Based User Interface:** A convenient sidebar allows users to set a customized prompt (Figure 1):

- Users can select:
 - Header row: number of header row (to skip when being processed);
 - Prompt to run each row: The prompt to run (user will set this). The value wrapped with `{{value}}` is the column name.
 - Put results in column: The column to put the results in;
 - Start from row:
 - Auto: choose number of rows (e.g. 3 rows); or All rows;
 - Fixed: choose a range of rows (e.g. 2 to 4 => row 2 to row 4;

SUM		=GPT_SUMMARIZE(B2;"Item list";0)	
	A	C	D
1	No	Description	Production Name
1		Stay hydrated and sustainable with the EcoSip Collapsible Water Bottle. Crafted from BPA-free, food-grade silicone, this 600ml bottle folds down to just a third of its size, making it the perfect companion for hikers, gym-goers, and busy commuters. Leak-proof, lightweight, and stylish, EcoSip is available in vibrant colors and comes with a carabiner for easy carrying. Say goodbye to bulky	Summarization
2		Transform your space with the LumiGlow Smart Light Strip – an RGB LED strip you can control with your voice or phone. Compatible with Alexa and Google Assistant, LumiGlow lets you set the mood with over 16 million colors, dynamic light patterns, and customizable schedules. Perfect for your bedroom, gaming setup, or behind-the-TV ambiance. Peel, stick, and light it up in minutes.	=GPT_SUMMARIZE(B2;"Item list";0)
3		Explore the world one cup at a time with the BeanBoss Premium Coffee Sampler Box. Featuring 6 single-origin roasts from Ethiopia, Colombia, Vietnam, Brazil, Guatemala, and Kenya, this curated collection offers a journey through bold, fruity, and earthy flavor profiles. Each 50g pack is freshly ground and vacuum-sealed for maximum aroma. A perfect gift for coffee lovers—or a delightful treat for yourself.	LED strip. - Can be controlled via voice or phone. - Compatible with Alexa and Google Assistant. - Offers over 16 million colors and - Includes 6 single-origin roasts - Origins: Ethiopia, Colombia, Vietnam, Brazil, Guatemala, Kenya - Features bold, fruity, and earthy flavor profiles - Each pack is 50g, freshly ground, and

Students only need to implement **one function** called **GPT_SUMMARIZE** as described below:

- #### 4. User-Friendly Experience:

- This plugin leverages Natural Language Processing (NLP) and AI models to provide accurate, customizable, and efficient AI prompting directly within excel processing applications.

- Source code and README.md (Usage guideline) are compressed in <MSSV>.zip