Golden Sapphire MCP POC

USER GUIDE

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CSV

Upload
CSV

Server

Signed URLs

Agent[A]

Database

CSV to JSON
Converter

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Invoke tool

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GS Data
Export

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Generation

Generate SQL

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FastMCP

Database

1. CSV File Upload

CSV

example
‹CSV

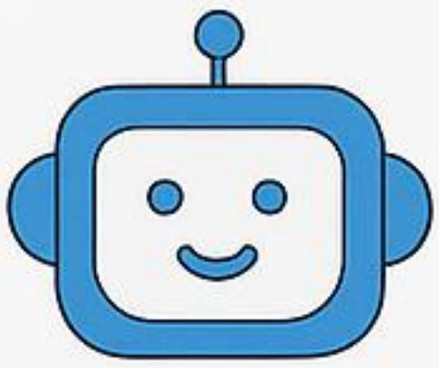
CSV

CSV

name 30
age ; 25
city 25

name: 30,
age: 30,
city 25}

2. File Conversion Agent



3. Converted JSON Response

```
{
   "id'; ']',
   "name": 50, New Y
   "city': 25, Longeles'
}
```

4. Data Export Invocation

User initiaties GSData-Export request

schema file id

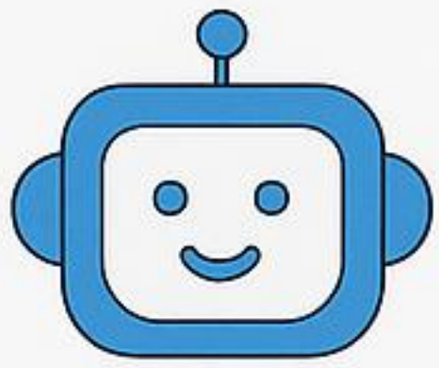
db config id

schema context

output format: csv

GSDataExport

5. SQL Generation Agent



6. Download Link Response

message: "Data exported successfully",

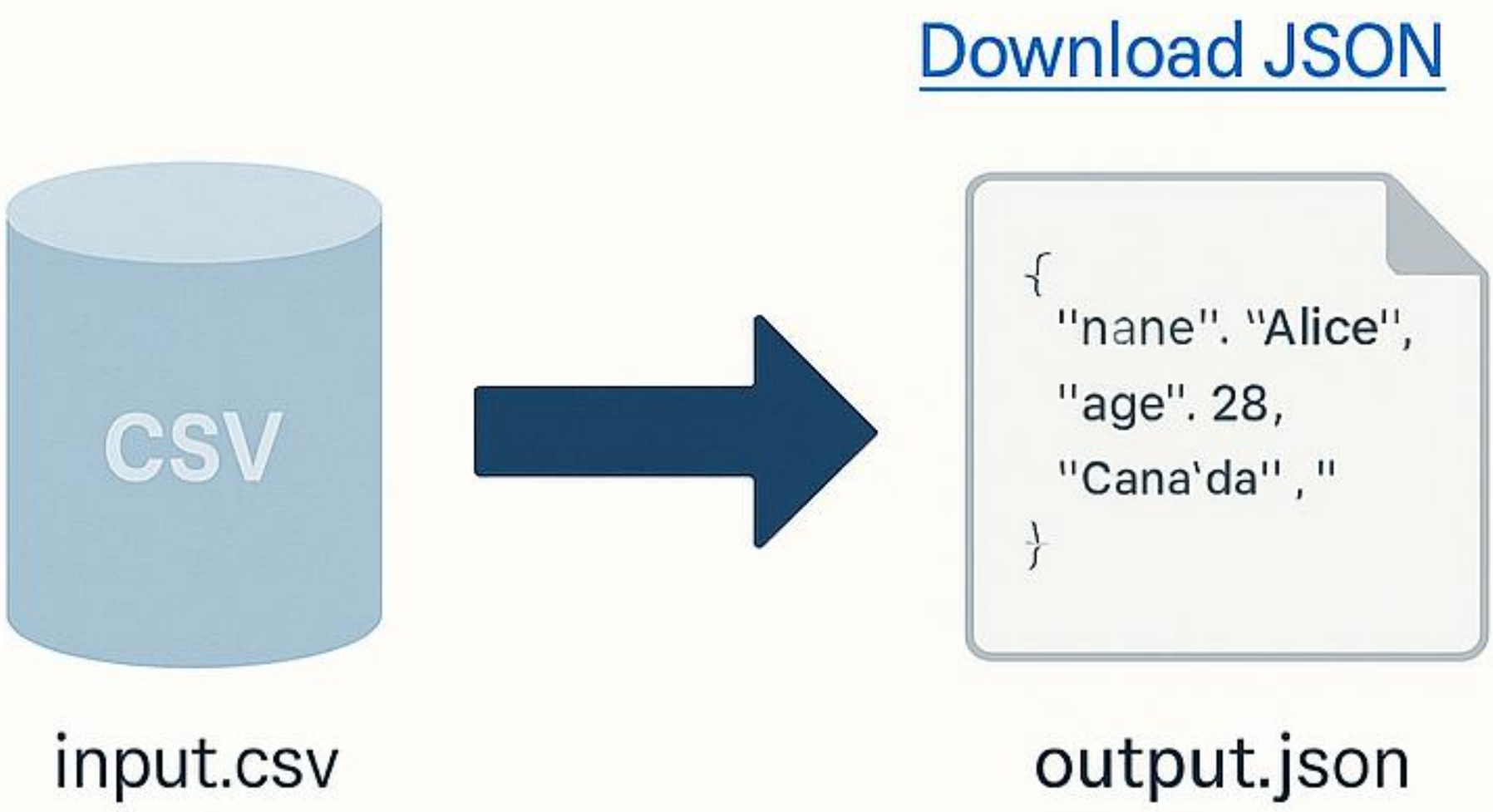
download_link: "https://example.com/download/exported_data.csv"

2. CSV to JSON Conversion

Function Name: csv_to_json

Description: Converts an uploaded CSV file to a JSON format and provides a download link for JSON file,

Input Parameters: file_id (str): The ID on uploaded CSV file



Converting CSV to JSON

The `csv_to_json` tool user JSON to json worts uploaded CSV file to JSON format. Drag and-drop a CSV file name `example.csv`.

Exporting Database Data

The `gs-data-export` tool makes rxporting database data by translating natural language queries into SQL, executing them on a user-specified database, and saving the results tio their format.

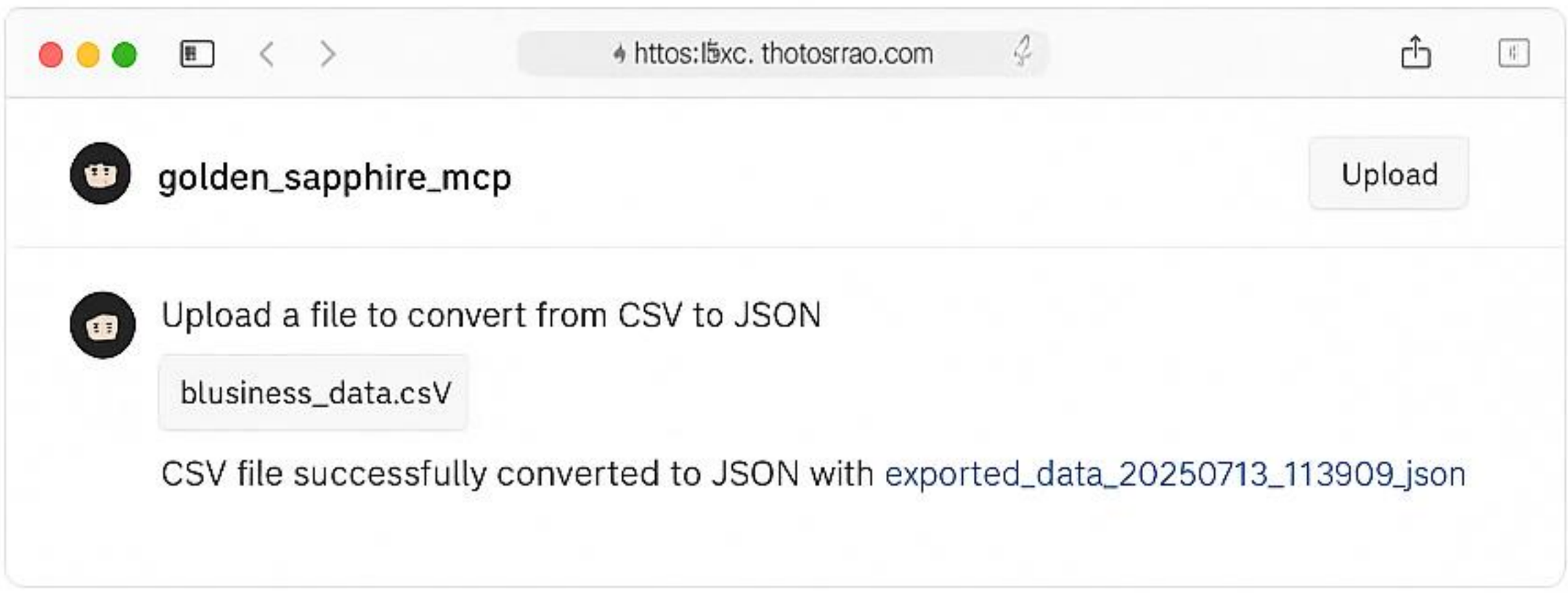
Usage Documentation

ETL Tool Implementation

This documentation provides an in-depth guide on implementing an ETL tool composed of two main processes, a) Converting CSV to JSON, and b) Exportin data from a database based on a natural language reguest. Each tool has been implemented as an MCP tool for modular integration and automation. The following outlines their functionalities and usage.

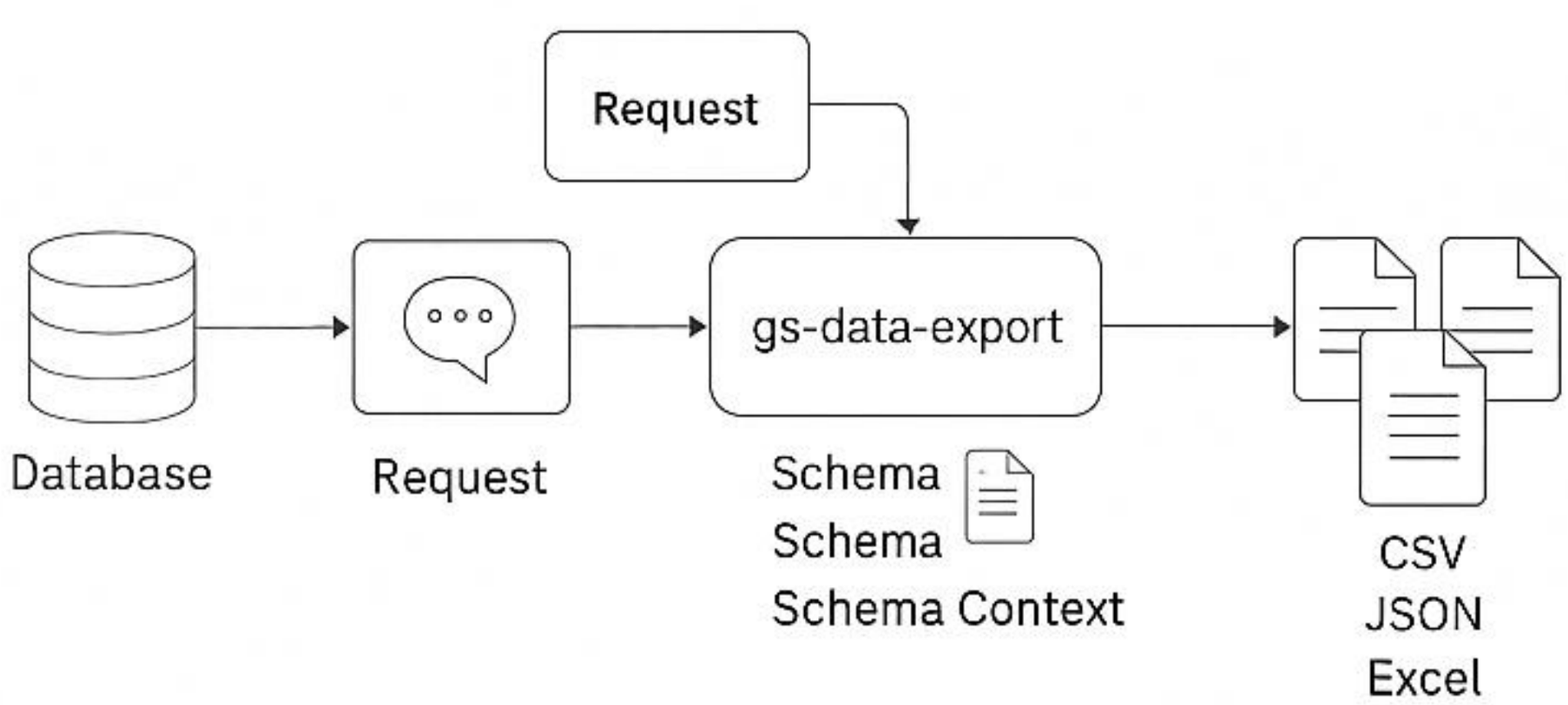
CSV to JSON Conversion Tool

The CSV to JSON conversion tool, titled csv-to-json, is designed to efficiently convert CSV files into JSON format. Below is the interface for usag in this tool:



Data Export Tool

The gs-data, export tool is designed to output data from a database in CSV, JSON, or Excel format based on schema definitions and natural language queries



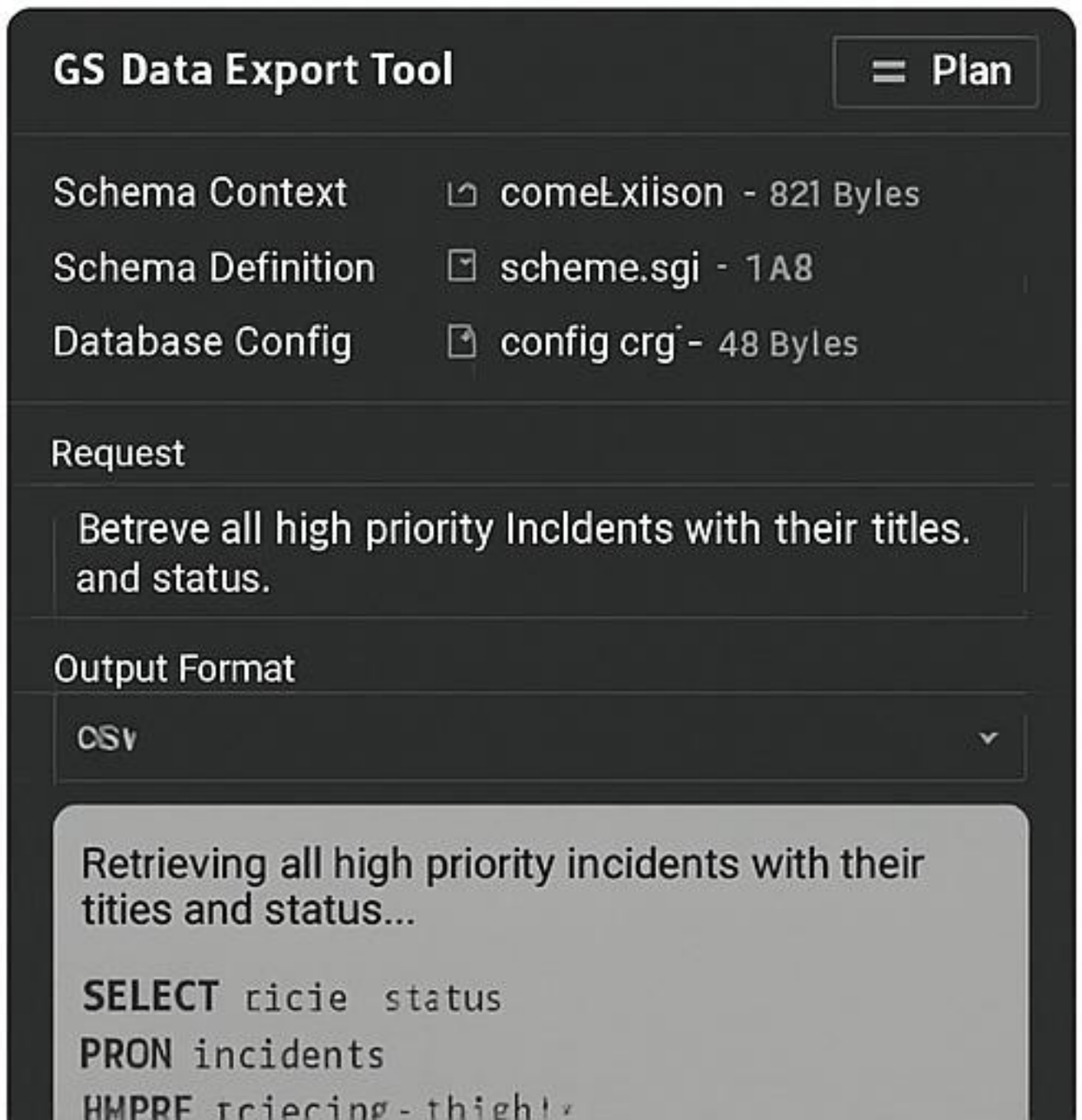
Understanding ‘gs-data-export’

Parameter	Description
schema_context file_id	File iD for the context file defining allases and descriptions prematched to your database tables and columns.
schema_file_id	File iD for the **raw** schema file, which con**taintain** either a SQL file with create table definitions, or a JSON file with a structured representation of the database schema,
db_config_file_id	File iD for the configuration file containing a database connection URL.
request	A natural language query descibing the data you want extract.
output_format	Specifys the desired export format (csv, json, or excel).

The ‘gs-data-export’ tool is designed to process a natural language query into a structured SQL command specifically tailored to your database schema. By up uploading schema context and schema definition files.’ the tool has the information it needs to understand your database structure. The resulting data is then exported in the format of your choice.

Using the Tool with Natural Language Queries

The GS Data Export Tool allows users to interact with their database using natural language. Here’s an illustrative example demonstrating a data query:



Usage Documentation

Data-to-JSON Conversion (cont'd)

TOOL OVERVIEW

This tool is designed to convert CSV data into JSON format_ by upload a CSV file and processing it.[2].

1 Uploading a CSV File

Step 1: Initiate a new conversation, then upload a CSV file.

2 Running the Conversion

Step 2: The tool processeso-generes the uploaded CSV file and generates a download link for converted JSON.

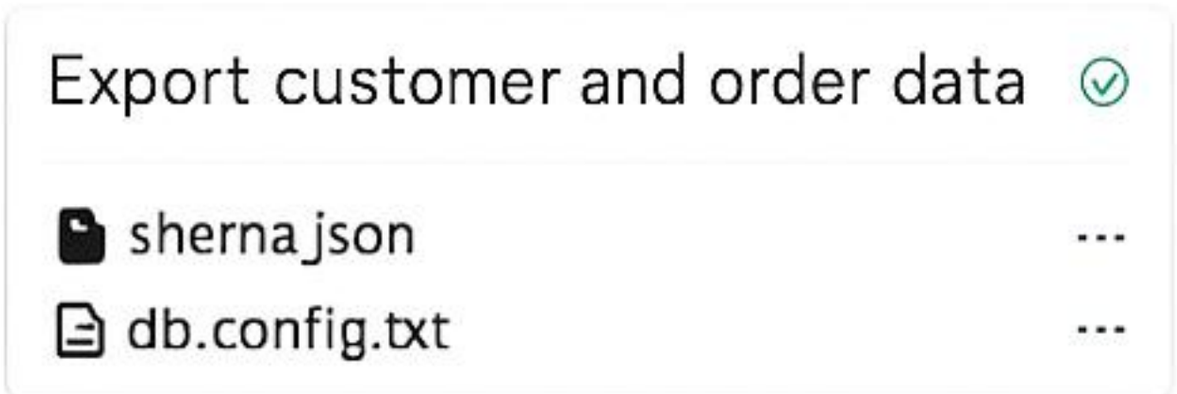
Data Export Tool

TOOL OVERVIEW

This tool respond to requests by querying a database and exports the results.

Supported output formats range CSV, JSON, Excel.

1 Preparing Schema Files and a Database Configuration

Step 1: Start a new conversation, attach two prepared files: to attach two

- JSON representation of table schemas
- Database configuration file