
Plug into AI with AI21
SQLGenius
SQLGenius
A smart C-Suite executives virtual assistant
AI21 labs
lab lab ai

Agenda

- Use Case Description
- Where we are now
- Architecture
- Demo
- Future Scope
- Get in Touch

Use Case

Problem

- Top executives and leaders have to depend on some analyst to get data or reports for them
- Little or no coding experience

Solution

- Smart virtual assistant which can provide them with reports and required data immediately
- Data can be downloaded and plots generated can be saved
- Voice Based Assistant
- Email Chat History or Data or Reports

Tech Stack

- AI21 - Large Language Models & LangChain
- Any cloud server to host application
- Database Credentials can be provided at run time
- Web App

Where We Are Now

Any Single Table Query Support at a time with an option to download the data

LangChain Tools can be leveraged to Build Custom SQL AGENTS

User Query in Natural Language

Extract Entities

Schema & Metadata from pre-existing data marts as inputs

Prompt Gen.- Schema & SF Query Rulesets

SF Query Generation

SQ Query Formatting & Validation

Error Message on Failed Validation after Formatting

Query to Human Understandable Format

For User Explainability

Data Summary & Insights

Query Output with Visualization & Data Summary

Demo


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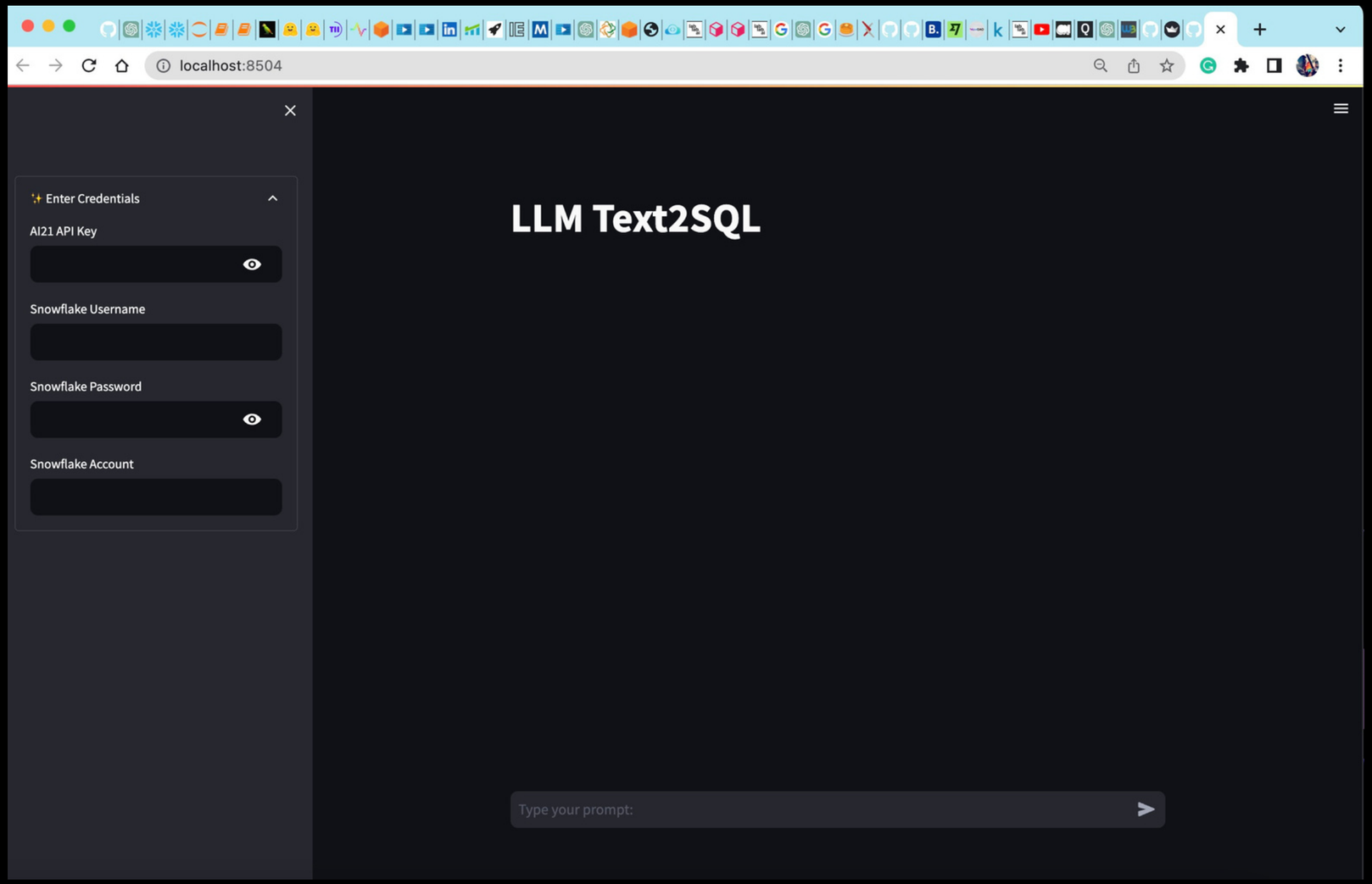
Landing Page

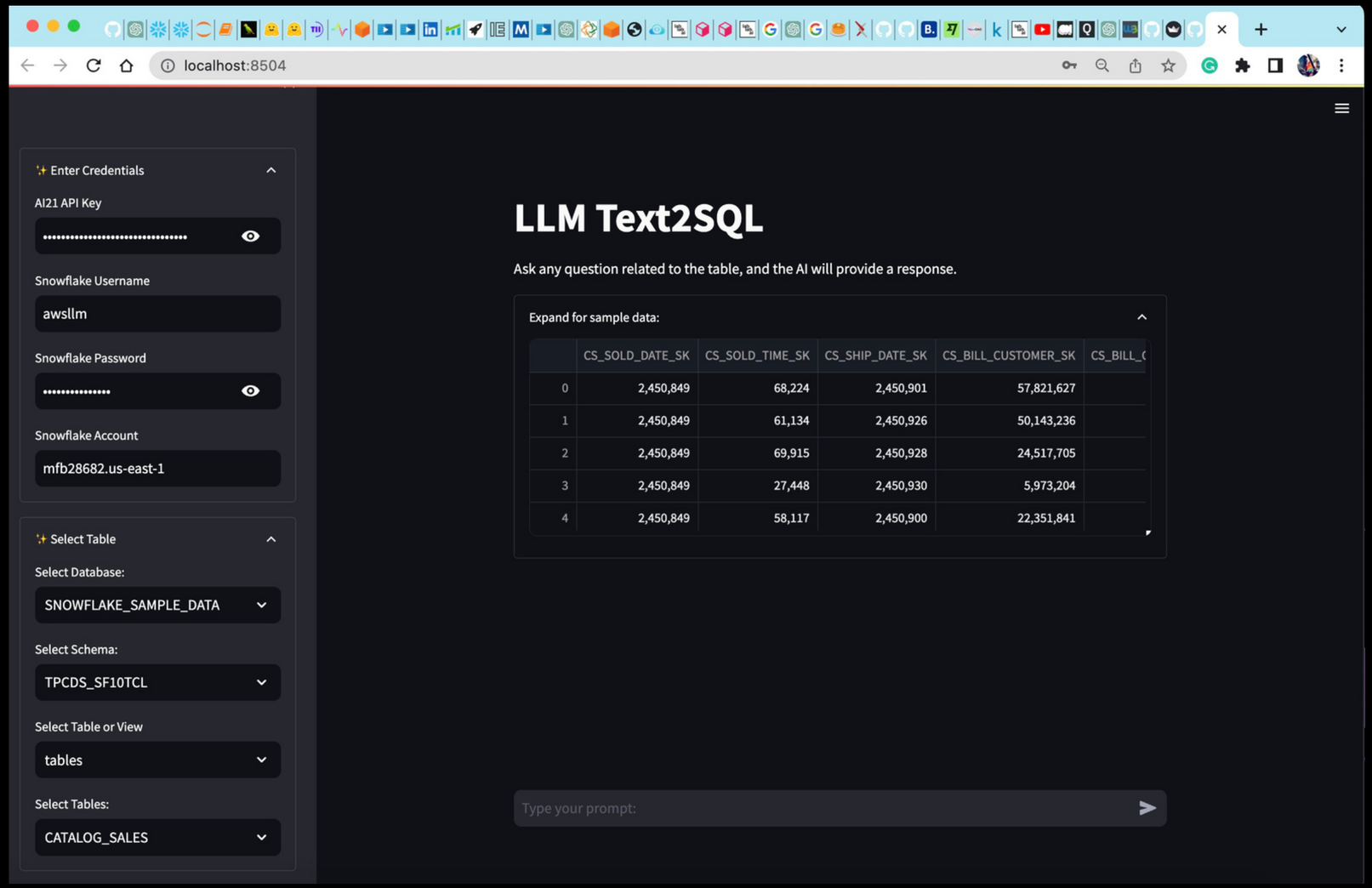
- Provide AI21 API key
- Provide Snowflake Credentials
  - Username
  - Password
  - Account URI without `snowflake.com`



After Creds Verification

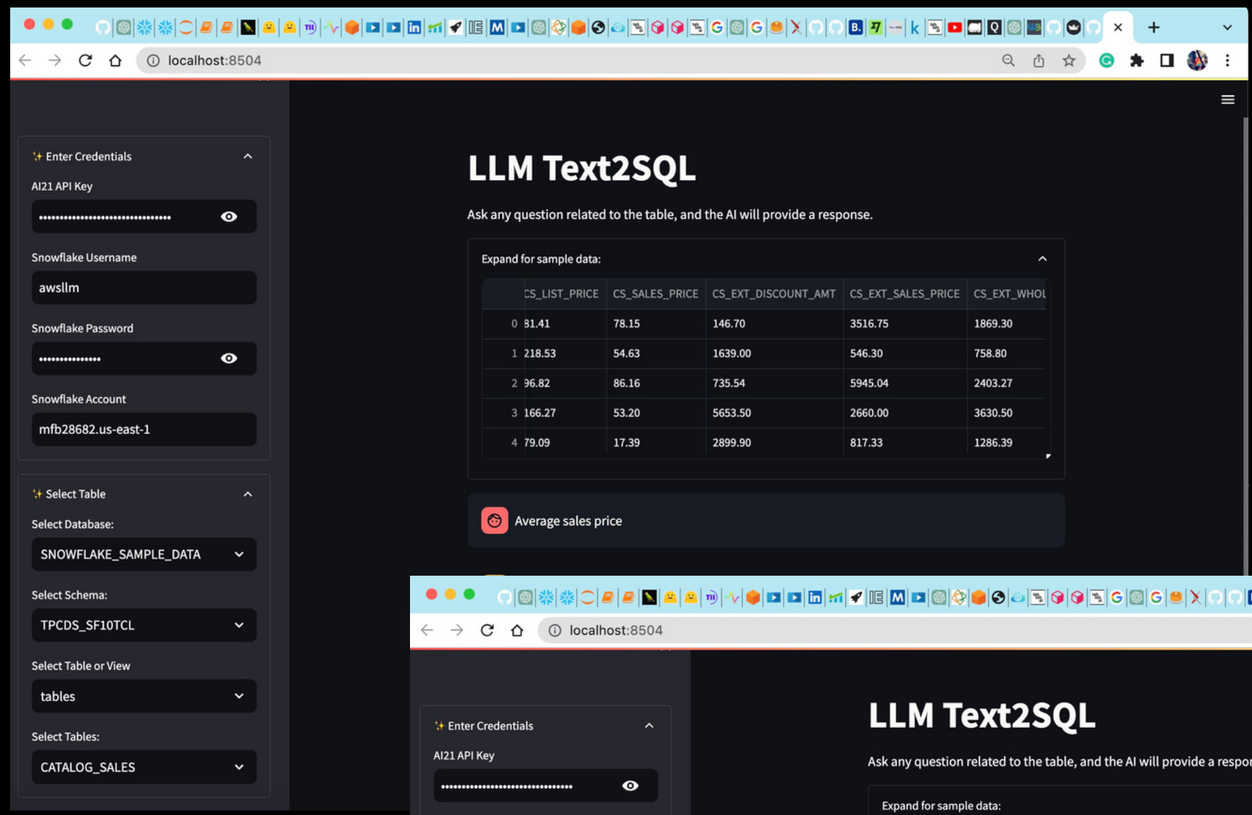
- Select Database
- Select Schema
- Select Tables/Views
- Select Table

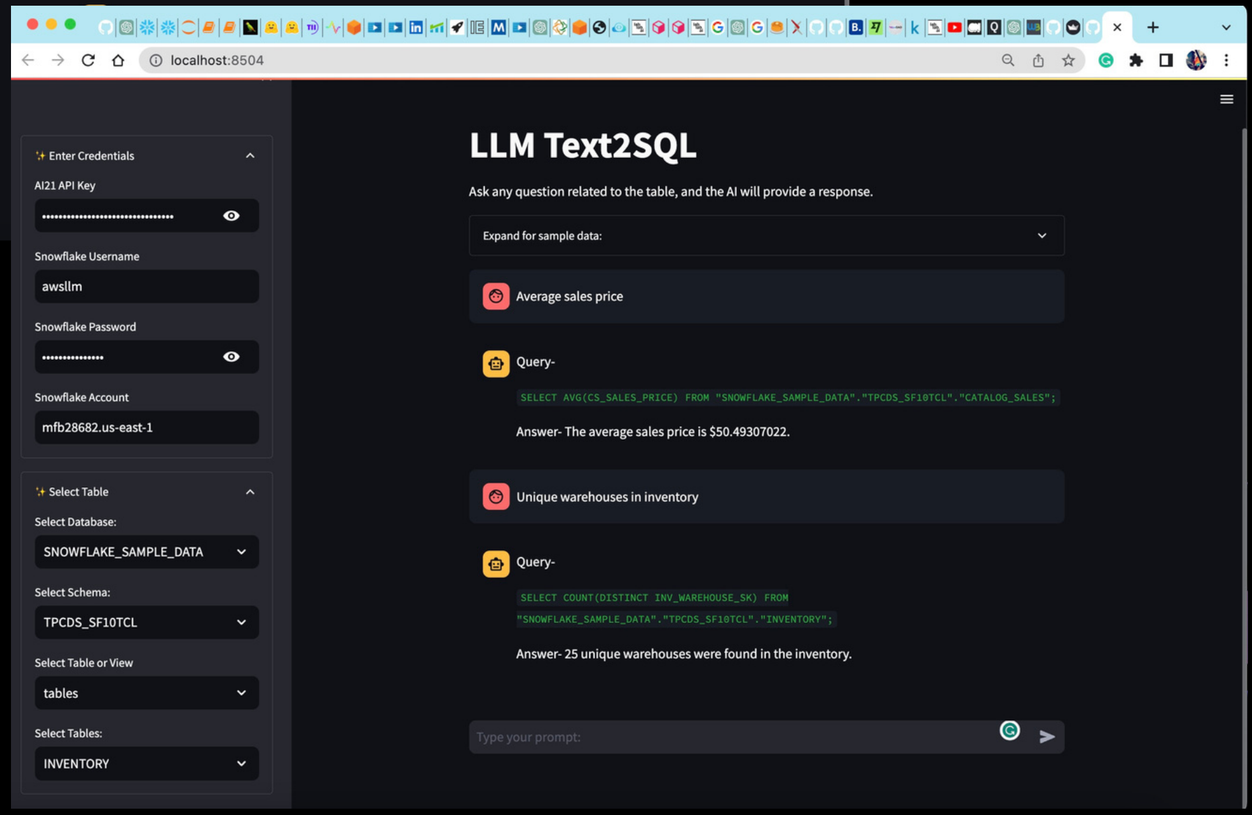
A sample data will be shown on the main page based on which we can query in the chat placeholder.



Conversation Flow

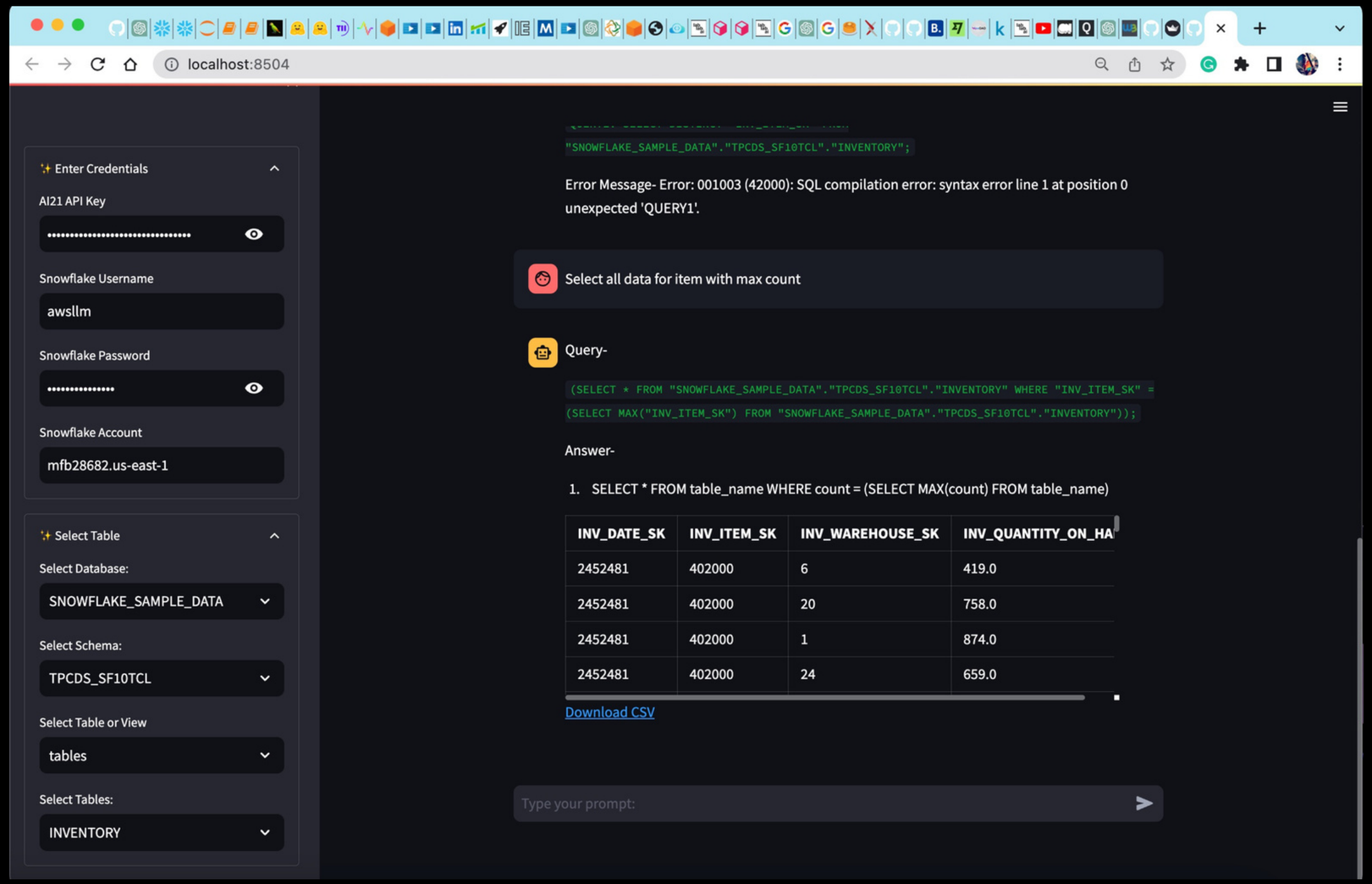
- Users can ask questions, and results will be given along with the query executed
- If case of any error in the query, in that case in place of result, the error message will be displayed





Download Data

- When the result returned is a data frame, the result can be downloaded as a CSV file too if needed for future reference or sharing



Future Scope

- Integrate visualization decision engine
- Add voice assistant
- Reduce response time
- Add multi-table support for each user query
- Insights & Explainability

Get In Touch

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