

When Your SME Ghosts You



Using GenAI to Build a Database Documentation Agent
By: Denise Williams

PyOhio 2025

The Problem

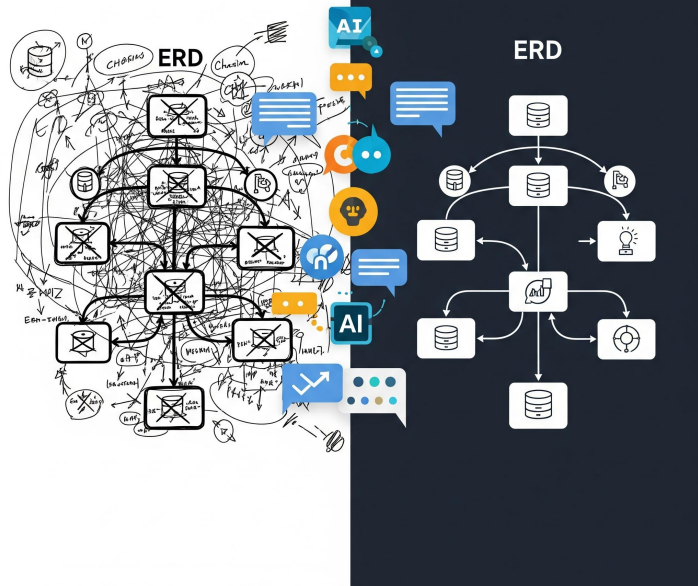
- Legacy databases are often:
 - Poorly documented 📄❌
 - Abandoned by SMEs 🕵️🚪
 - Critical but hard to query 😞
- Key question: **What happens when the SME leaves?**



The Use Case

We needed a tool that could:

- Auto-generate documentation
- Track changes over time
- Provide quick schema overviews
- Support Q&A in plain language



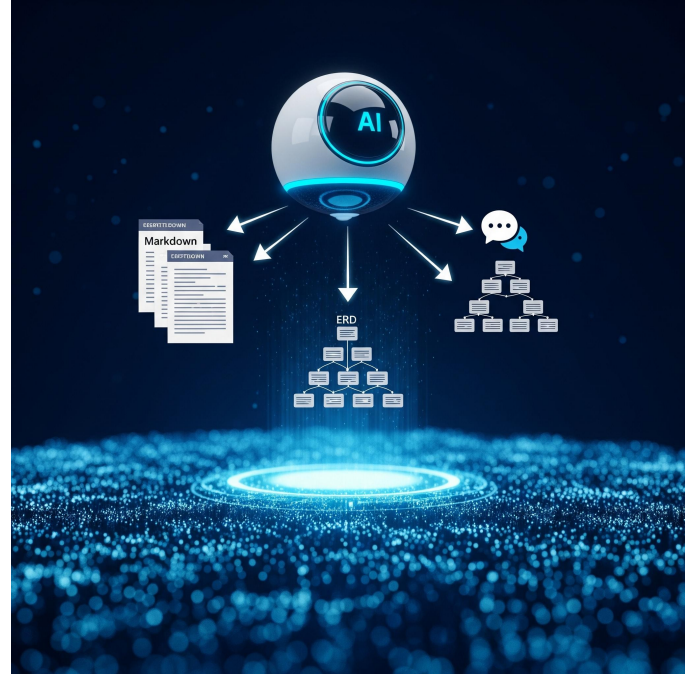
The Solution

Database Documentation Agent

- Powered by:
 - Gemini 2.5 Flash Lite
 - SQLite (for MVP)
 - Python backend

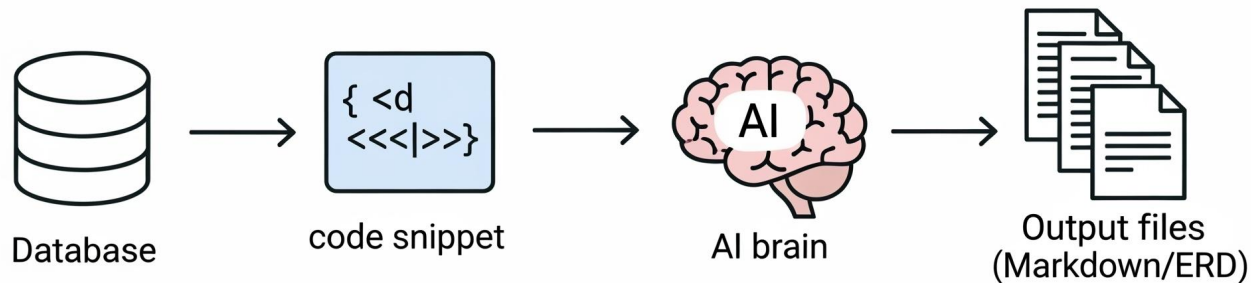
Features:

- Schema summarization
- ERD generation
- Natural language Q&A



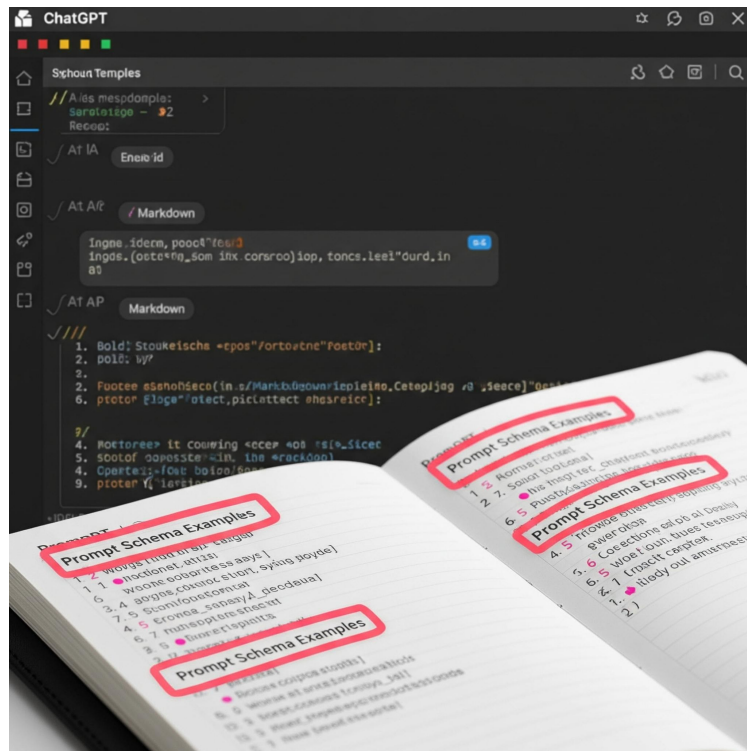
Architecture Overview

Diagram:



Prompt Engineering Strategy

- Few-shot examples for consistency
- Structured, schema-driven prompts
- Output formatted in Markdown



SME Ghost Protocol

AI as a backup SME:

- Preserves tribal knowledge
- Accelerates onboarding
- Documents systems no one wants to touch



Lessons Learned

- LLMs are great for summarizing structure
- Human review still matters
- Bonus: leveled up my own SQL and coding skills



Future Enhancements

- Multi-DB support (PostgreSQL, MySQL)
- Web UI with Streamlit or Flask
- Scheduled syncs for change tracking
- Integrations (Notion, GitHub, Confluence)

Let's Demo

Live walkthrough of:

- Schema summary output
- ERD generation
- Natural language Q&A



Stay Connected

- Scan to connect on LinkedIn
- Ask questions, collaborate, or follow my journey



Denise N Williams, MBA

AI Innovation Specialist | Agile Technical
Project Manager | Data Scientist | MVP S...

