Practical Software Engineering



ZEISSSmart Chat,ChatbotBetter Business



Motivation and Goals

- Chatbot for the Software Zeiss Inspect
- Zeiss Inspect: Analytic Software for 3D-Data
- Creates Python script addons for users of Software
- Goal: Evaluation if chatbot works with given documentation
- Comprehensive Documentation: Documenting development process, providing valuable insights for future improvements, troubleshooting & development



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Evaluation

- Comparing Large Language Models: GPT-3.5 vs GPT-4 vs GPT-40
- Comprehensive vs. Partial documentation training
- Fine-Tuning vs Retrieval Augmented
 Generation



Customer Value

- Ease of Use: Customers describe their problems or goals in natural language, chatbot simplifies process of script creation
- Quick Solutions: Customers receive instant solutions to their queries, improving overall experience with Zeiss inspect
- **Customization:** Customers can create highly customized solutions without needing extensive programming skills

Results

- Fine-Tuning is less suitable than RAG for this use case
- Chatbot built using the Flowise Framework
- GPT4 and GPT4o performed better than GPT3.5
- More documentation improves performance





- Limited training data available
- LLM provides false answers



Architecture



This script will create a new project in Zeiss Inspect.

How can I create a new part (in an existing project)?

>

To create a new part in an existing project in Zeiss Inspect, you can use the following Python script:

Creates a new part in your project with the name 'Part 1'
PART_OBJECT = gom.script.part.create_new_part(name='Part 1')

Type your question

Chat with Model GPT-3.5 (RAG Approach)

Architecture Diagram in Flowise Framework

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