

GRCResponder

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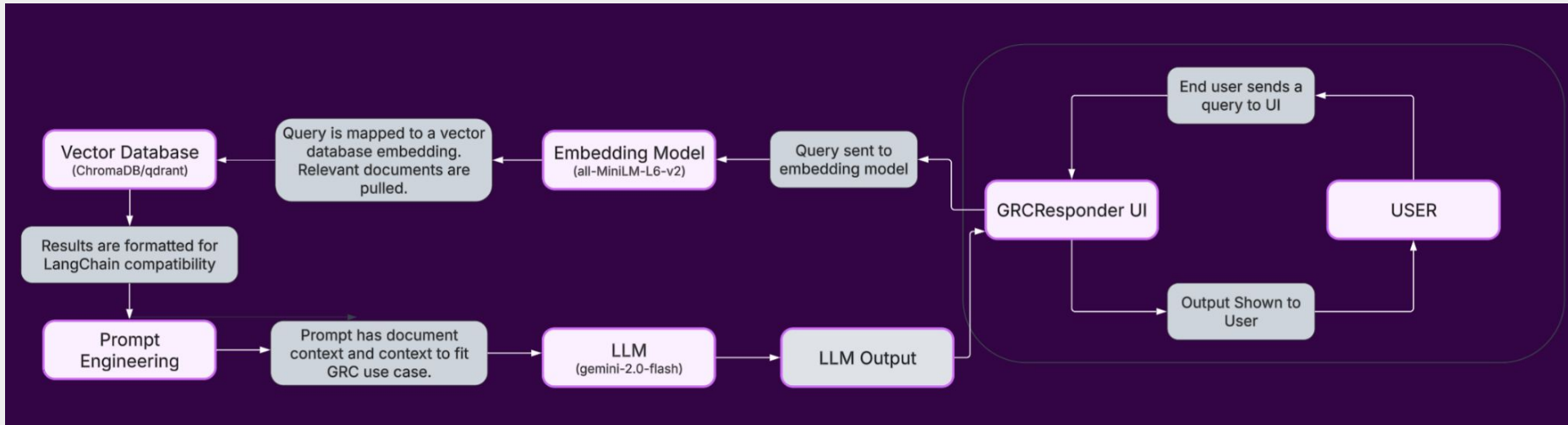
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Current Timeline...

- **Week 6 - 7: Testing & Refine performance**
 - Polish web app based on user testing
 - Begin documentation/report
 - Host on UCI Server (Pending TA + Professor Guidance)
 - Deliverables: Web app link, report
- **Week 8 - 9: Wrap up any last-minute changes or performance updates**

From Query to Response...



Backend Development

Threading

- First large insertion test
 - ~100 proceedings added
 - ~500 associated documents

Next Steps

- Before scaling up documents need to fine tune:
 - Batch size
 - Thread count
 - Resource allocation
 - Metadata parameters

Retrieval

Advanced Retrieval Methods

- Hyde retrieval + Cross Encoder reranking
 - Overall improvement in a relevance score and usage score using Cross Encoder retrieval
- Modifying LLM instructions to accept a wider range of queries
 - Currently encountering inconsistent behavior in the LLM pipeline where certain queries are prematurely rejected without attempting retrieval.

LLM Updates

Current Status:

- Implemented chat history
- Separated metric results by difficulty

Ongoing Work:

- Improve retrieval and context usage

Preliminary Metrics w/ K=8:

Metrics by difficulty:

Easy (30 questions):

Relevance: 2.13/5

Usage: 2.00/5

Accuracy: 0.90/5

Medium (18 questions):

Relevance: 1.67/5

Usage: 1.67/5

Accuracy: 1.94/5

Hard (12 questions):

Relevance: 2.33/5

Usage: 2.08/5

Accuracy: 2.50/5

LLM Updates

Sample Responses

1.

Query: "What information do you have on PG&E from your retrieval"

GRC Assistant: I have information regarding PG&E from the data I retrieved, specifically from the 2023 General Rate Case (GRC) proceeding (A.21-06-021). This includes details about PG&E's:

- * **Short-Term Incentive Plan (STIP):** ... (PG&E GRC A.21-06-021).
- * **Employee Recognition Program:** ... (PG&E GRC A.21-06-021).
- * **Undergrounding of Distribution Assets:** ... (PG&E GRC A.21-06-021).
- * **General Rate Case (GRC) Application:** ... (PG&E GRC A.21-06-021).
- * **Non-Tariffed Products and Services:** ... (PG&E GRC A.21-06-021).
- * **Ratepayer Benefits from Transactions:** ... (PG&E GRC A.21-06-021).
- * **Electric Vehicle (EV) Purchases:** PG&E plans to electrify vehicles at the end of their useful life, leveraging existing planned funding to lower the overall costs of replacing gas-powered vehicles with electric vehicles (PG&E GRC A.21-06-021, Reply Brief at 553-554). PG&E plans to purchase sport utility vehicles and half-ton pickup trucks in 2023 and equip certain aerial bucket trucks with plug-in Jobsite Energy Management Systems to eliminate engine idling (PG&E GRC A.21-06-021).

Would you like me to explore any of these aspects in greater depth or provide information on other topics related to PG&E's GRC?

Processing time: 7.84 seconds

2.

QUERY: "I am interested learning more about the Non-Tariffed Products and Services"

GRC Assistant: I can certainly provide more details regarding PG&E's Non-Tariffed Products and Services (NTP&S) as discussed in the 2023 General Rate Case (GRC) proceeding (A.21-06-021).

Overview of PG&E's Non-Tariffed Products and Services

PG&E's Non-Tariffed Products and Services (NTP&S) program is designed to generate incremental revenues by marketing products and services to third parties, primarily using underutilized PG&E assets or capacity (PG&E GRC A.21-06-021, Ex-06 at 2-17). This initiative aligns with the Affiliate Transaction Rules, specifically Rule VII, established by the Commission in D.06-12-029 (PG&E GRC A.21-06-021).

Key Aspects of the NTP&S Program

- * **Types of Transactions:** ...
- * **Revenue and Expense Forecasts:** ...
- * **Ratepayer Benefits:** ...
- * **Shareholder Involvement:** ...

Concerns and Lack of Transparency

- * **Limited Information:** ...
- * **Unclear Cost of Service Reduction:** ...
- * **Difficulty Discerning Financial Support:** ...
- * **Lack of Evidence:** ...

Regulatory Compliance

PG&E states that it offers its Non-Tariffed Products and Services consistent with the Affiliate Transaction Rules, Rule VII, adopted by the Commission in D.06-12-029 (PG&E GRC A.21-06-021).

Would you like me to explore any specific aspect of PG&E's Non-Tariffed Products and Services in more detail, such as the Affiliate Transaction Rules, the financial aspects, or the concerns raised during the GRC proceeding?

Processing time: 5.36 seconds

3.

QUERY: "What was my first question?"

GRC Assistant: Your first question was: "What information do you have on PG&E from your retrieval"

Processing time: 0.52 seconds

Research Updates

- **Journal: Expert Systems with Applications**
 - Align with the scope of dealing with design, development, testing, and implementation of expert and intelligent systems
 - Subscription route -> no fee
- **Current Status**
 - Have paper outline with section headings drafted and a skeleton
 - Incorporate class process report to paper
 - Research related papers and studies for literature review
 - Research more into common experimental evaluation methods
 - Precision@k, latency measurements, SUS scoring

Questions?
