



Jazz Pharmaceuticals®

Protocol-Aware AI Chatbot

Seamus Gallivan



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IDASP Team

| **Outline**

1. Jazz's in-house chatbot intro
2. Chatbot components
3. Component demo
4. Full chat session demo
5. Future Outlook
6. Performance and Testing

Chatbot Parts

About

This chatbot uses Foundational Large Language Models and input context document(s) to generate natural language responses to user's queries".

Select a LLM

TheBloke/Llama-2-7B-Chat-... ▾

Select a Db

FAISS ▾

Select an Embedding

all-mpnet-base-v2 ▾

Save Configuration

Update Context DB

Enter Filename to Save Chat (*.xlsx):

UserID_chat.xlsx

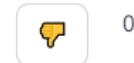
Save File



Jazz's Contextual Chatbot

Ask your question here:

Get Answer



👍: 0
(0.0%)

Reset

5

6

Configuration Panel

About

This chatbot uses Foundational Large Language Models and input context document(s) to generate natural language responses to user's queries".

Select a LLM

TheBloke/Llama-2-7B-Chat-... ▼

Select a Db

FAISS ▼

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all-mpnet-base-v2 ▼

Update Context DB

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UserID_chat.xlsx

Save File



Jazz's Contextual Chatbot

Ask your question here:

Get Answer



0



0

👍: 0
(0.0%)

Reset

Context DB

The screenshot shows a web browser window with the URL `rworkbench.jazzpharma.com/s/31bd43c9ab5a78bde64e6/p/c83be737/`. The browser's address bar and tabs are visible at the top. Below the browser window, a Windows taskbar is shown with various application icons and the system clock indicating 12:34 PM on 9/27/2024.

Left Sidebar (Context Configuration):

- About:** This chatbot uses Foundational Large Language Models and input context document(s) to generate natural language responses to user's queries".
- Select a LLM:** TheBloke/Llama-2-7B-Chat-...
- Select a Db:** FAISS
- Select an Embedding:** all-mpnet-base-v2
- Update Context DB:** Button
- Enter Filename to Save Chat (*.xlsx):** UserID_chat.xlsx
- Save File:** Button

Main Content Area:

- Jazz Pharmaceuticals Logo:** Located at the top of the main area.
- Jazz's Contextual Chatbot:** The main heading.
- Ask your question here:** A text input field for user queries.
- Get Answer:** Button to submit the query.
- Feedback:** Thumbs up/down icons with a count of 0.
- Reset:** Button to clear the chat.

Uploading Individual Context Files

About

The Clinical Trials Knowledgebase uses **Llama-2-7B-Chat-GGML** model and was contextualized on "XANI protocols".

Select a LLM

TheBloke/Llama-2-7B-Chat-... ▼

Select a Db

FAISS ▼

Select an Embedding

all-mpnet-base-v2 ▼

Save Configuration

Upload PDF file

Drag and drop file here

Limit 200MB per file • PDF

Browse files

Clinical Trials Knowledgebase Chatbot

Ask your question here:

Get Answer



0



0

👍: 0
(0.0%)

Reset

Chat Session

About

This chatbot uses Foundational Large Language Models and input context document(s) to generate natural language responses to user's queries".

Select a LLM

TheBloke/Llama-2-13B-Chat...

Select a Db

FAISS

Select an Embedding

all-MiniLM-L6-v2

Update Context DB

Enter Filename to Save Chat (*.xlsx):

UserID_chat.xlsx

Save File



Jazz's Contextual Chatbot

Ask your question here:

Get Answer

 0

 0

 : 0
(0.0%)

Reset

Chat Session - Source Referencing

About

The Clinical Trials Knowledgebase uses Llama-2-7B-Chat-GGML model and was contextualized on "XANI protocols".

Select a LLM

TheBloke/Llama-2-13B-Chat... ▼

Select a Db

FAISS ▼

Select an Embedding

all-mpnet-base-v2 ▼

Save Configuration

Upload PDF file

Drag and drop file here

Limit 200MB per file • PDF

Browse files

Enter Filename to Save Chat (*.xlsx):

UserID_chat.xlsx

Clinical Trials Knowledgebase Chatbot

Ask your question here:

Use document "ZWI-ZW25-201" for responding to this question. What is the minimum count of evaluabl

Get Answer



0



0



0
(0.0%)

Reset

Use document "ZWI-ZW25-201" for responding to this question.
What is the minimum count of evaluable patients to be enrolled in part 1 of this study?

Source: From user

To enroll 23 evaluable patients, terminate stage 1 with a sample size of 23. To enroll 37 evaluable patients, proceed to stage 2 with a sample size of 37.

Source: page_content='objective response (CR or PR per RECIST 1.1), an

Saving Conversation

About

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Select a Db

FAISS ▼

Select an Embedding

all-mpnet-base-v2 ▼

Save Configuration

Upload PDF file

Drag and drop file here
Limit 200MB per file • PDF

Browse files

Enter Filename to Save Chat (*.xlsx):

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Clinical Trials Knowledgebase Chatbot

Ask your question here:

Get Answer

👍 0 👎 0 👍: 0 (0.0%) Reset

Future Outlook

- Ingesting data tables, figures and other formatted digital data from .pdf files
- Human-in-the-loop: using user's inputs to improve performance
- Outputting chat responses in other digital formats like .pptx, .xlsx, reports, etc.

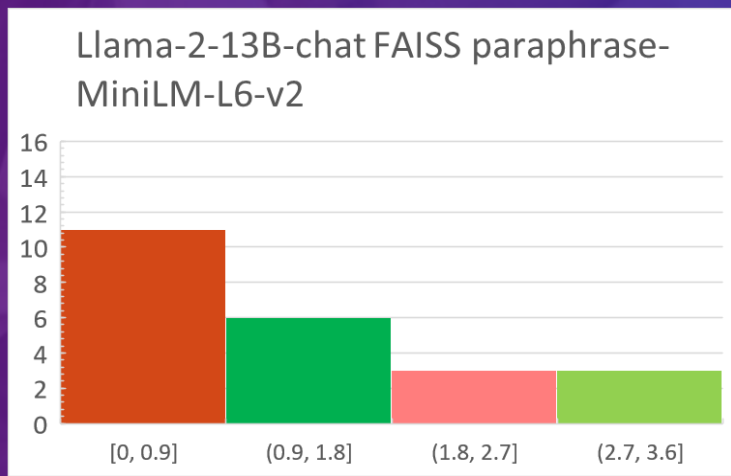
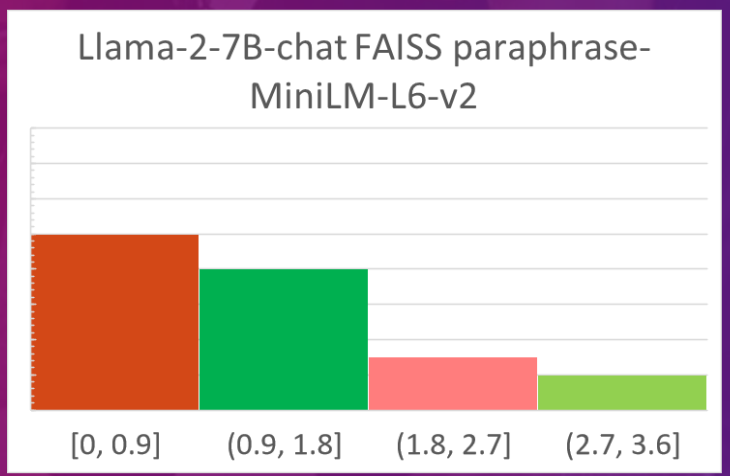
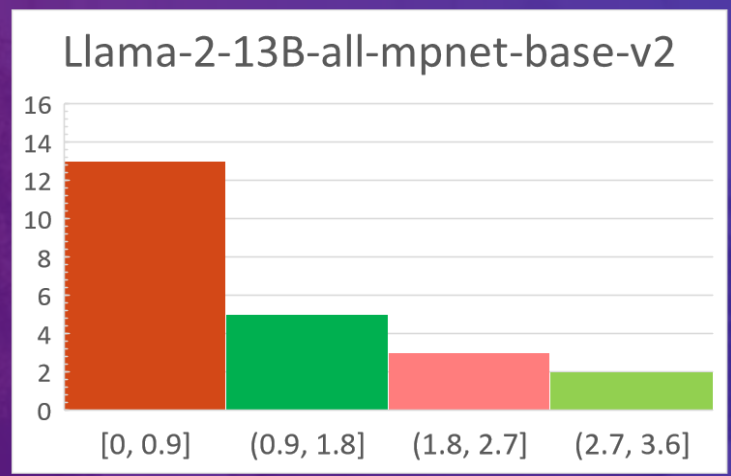
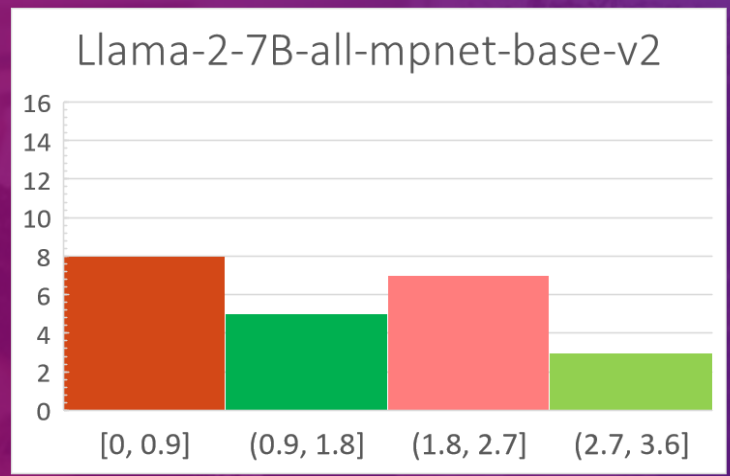
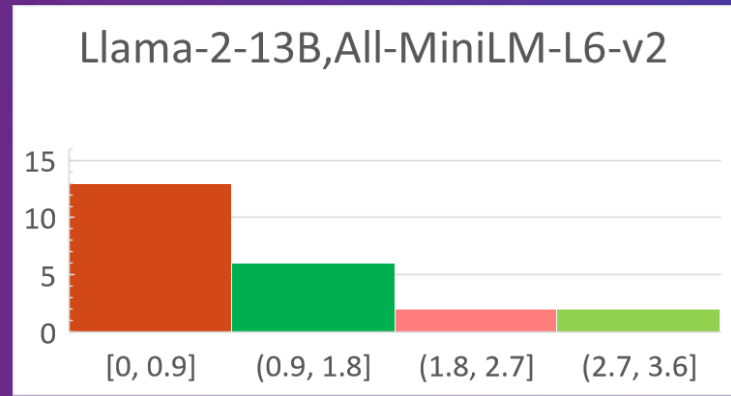
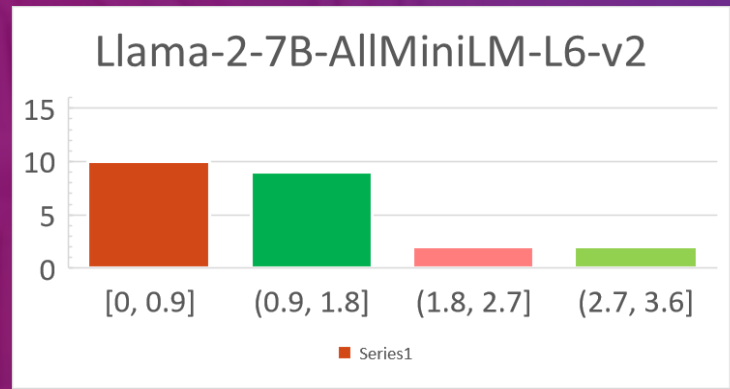
Performance Assessment Tool

- Created an assessment tool with 23 questions from ZW25 Protocol
 - 9 'low-intelligence' questions
 - a. What is the meaning of "RD"?
 - 6 'mid-intelligence' questions
 - a. Provide a list of the physician's choice of combination chemotherapy
 - 8 'high-intelligence' questions
 - a. What does Part 1 and Part 2 of the study evaluate?

Overall Performance

(without optimizing)

- 0-wrong
- 1-correct
- 2-gave answer but not accurate
- 3-not complete list , but correct answers



Overall Performance (low intel)

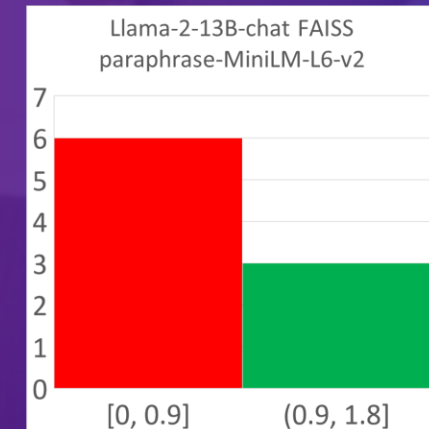
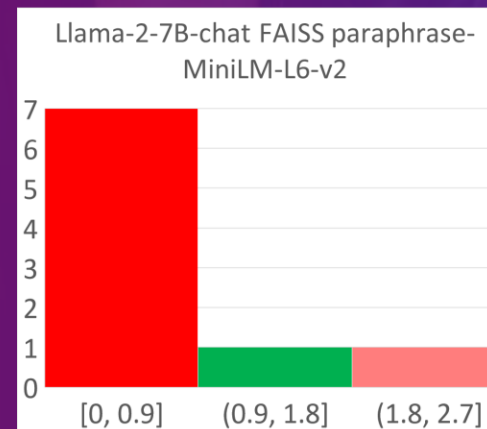
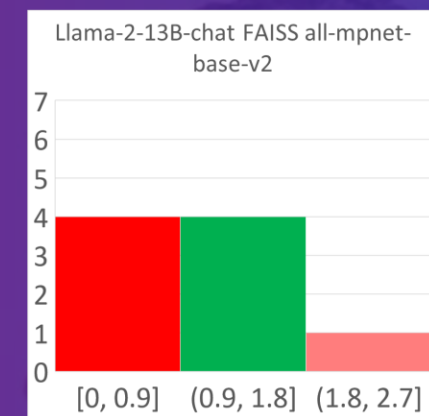
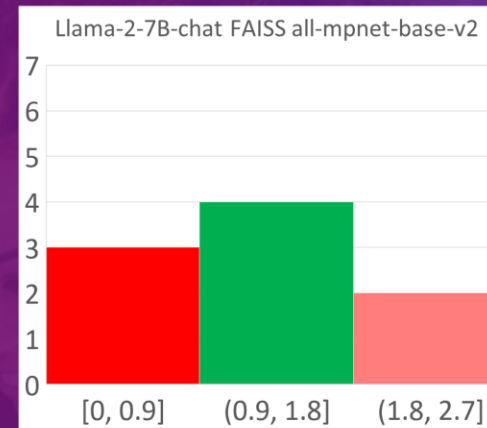
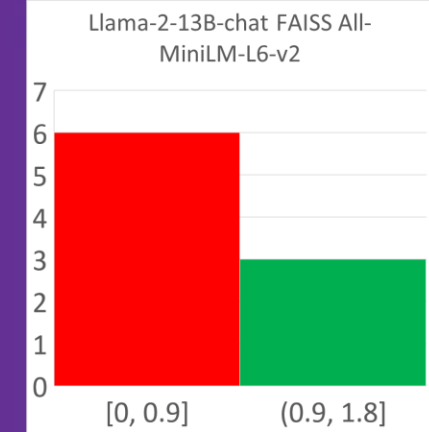
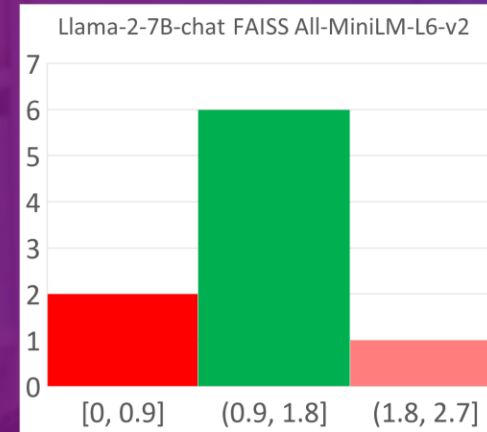
(without optimizing)

0-wrong

1-correct

2-gave answer but not accurate

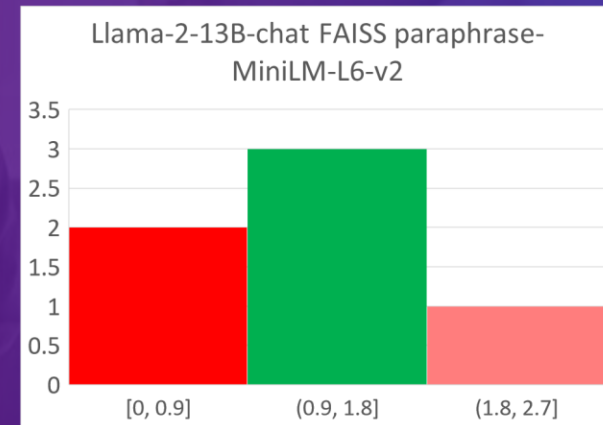
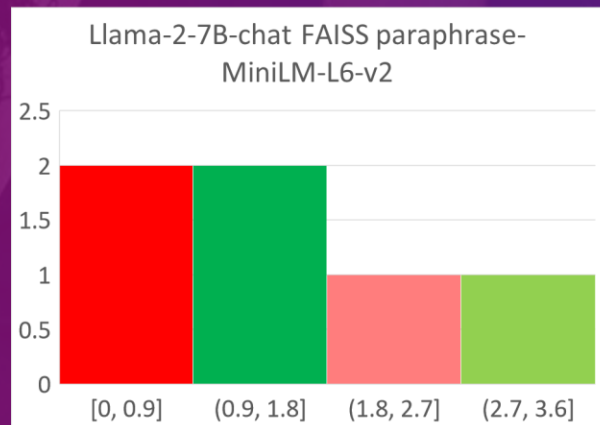
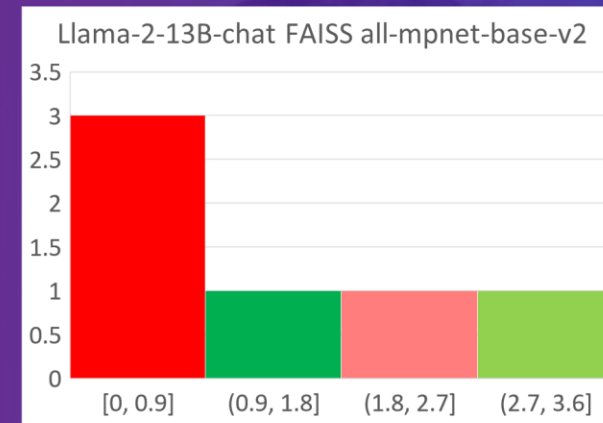
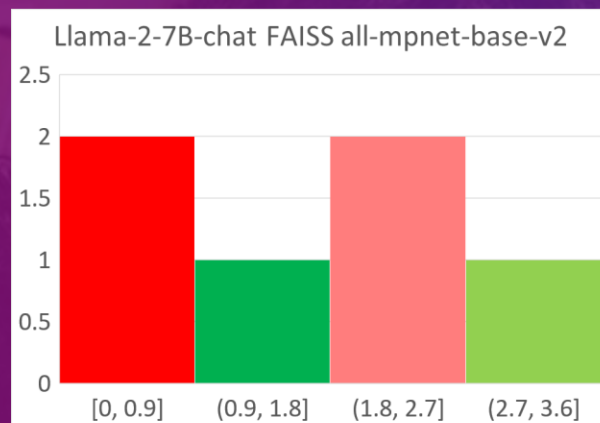
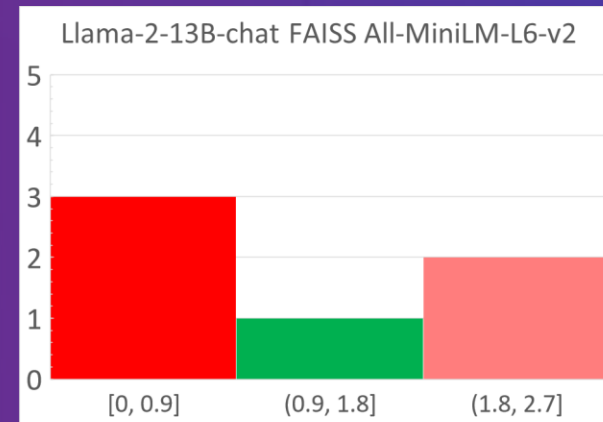
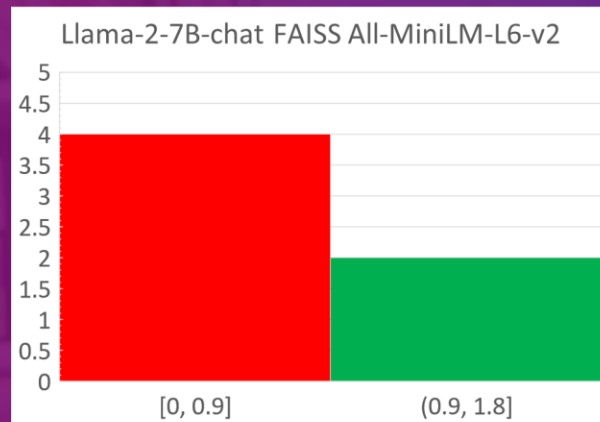
3-not complete list , but correct answers



Overall Performance (mid intel)

(without optimizing)

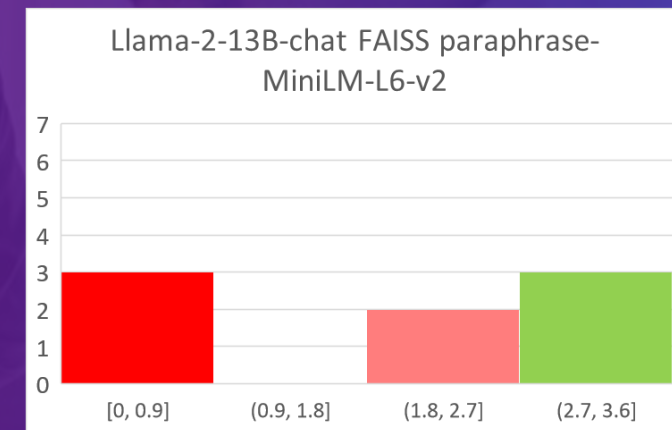
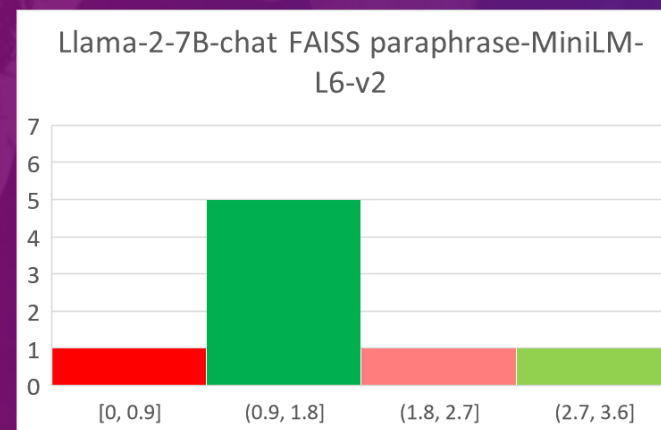
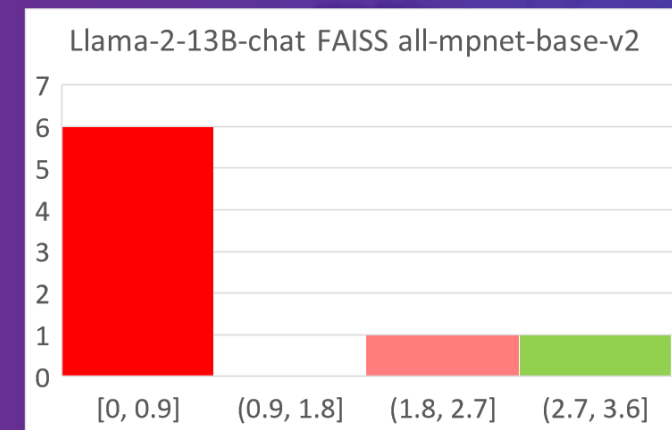
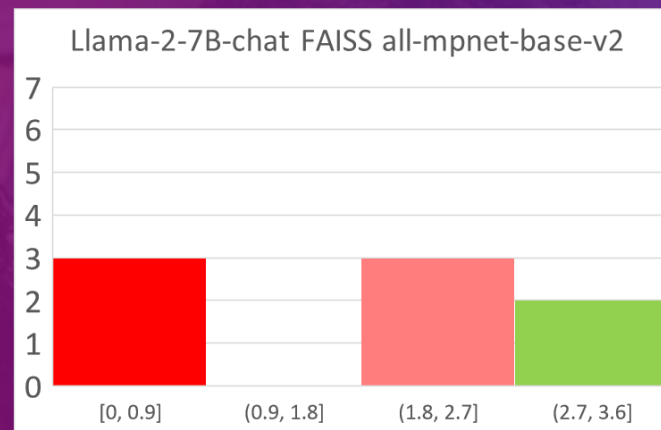
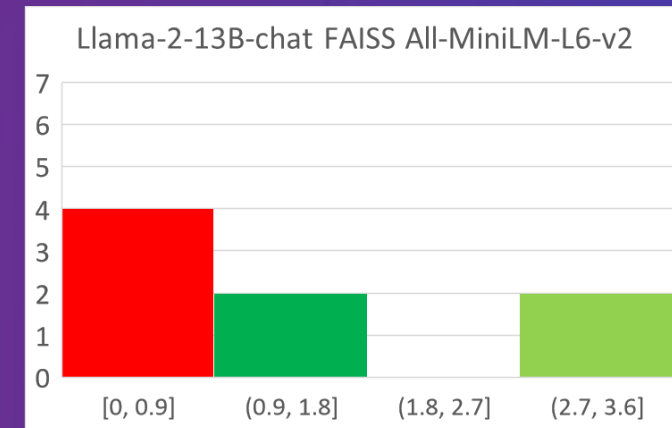
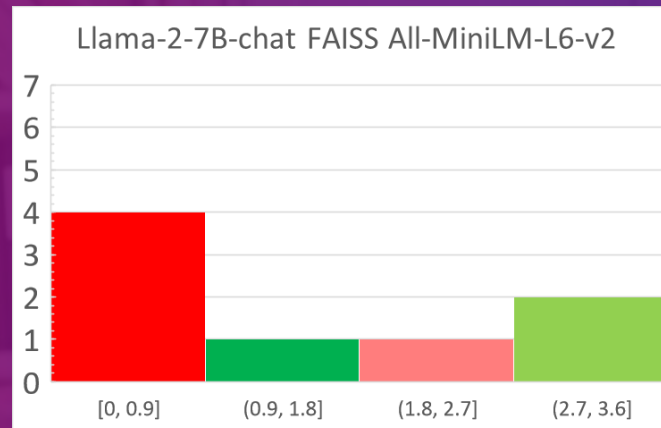
0-wrong
1-correct
2-gave answer but not accurate
3-not complete list , but correct answers



Overall Performance (high intel)

(without optimizing)

0-wrong
1-correct
2-gave answer but not accurate
3-not complete list , but correct answers



OVERVIEW



Chatbot
Components



Modular Approach



Flexibility with
under-the-hood
components



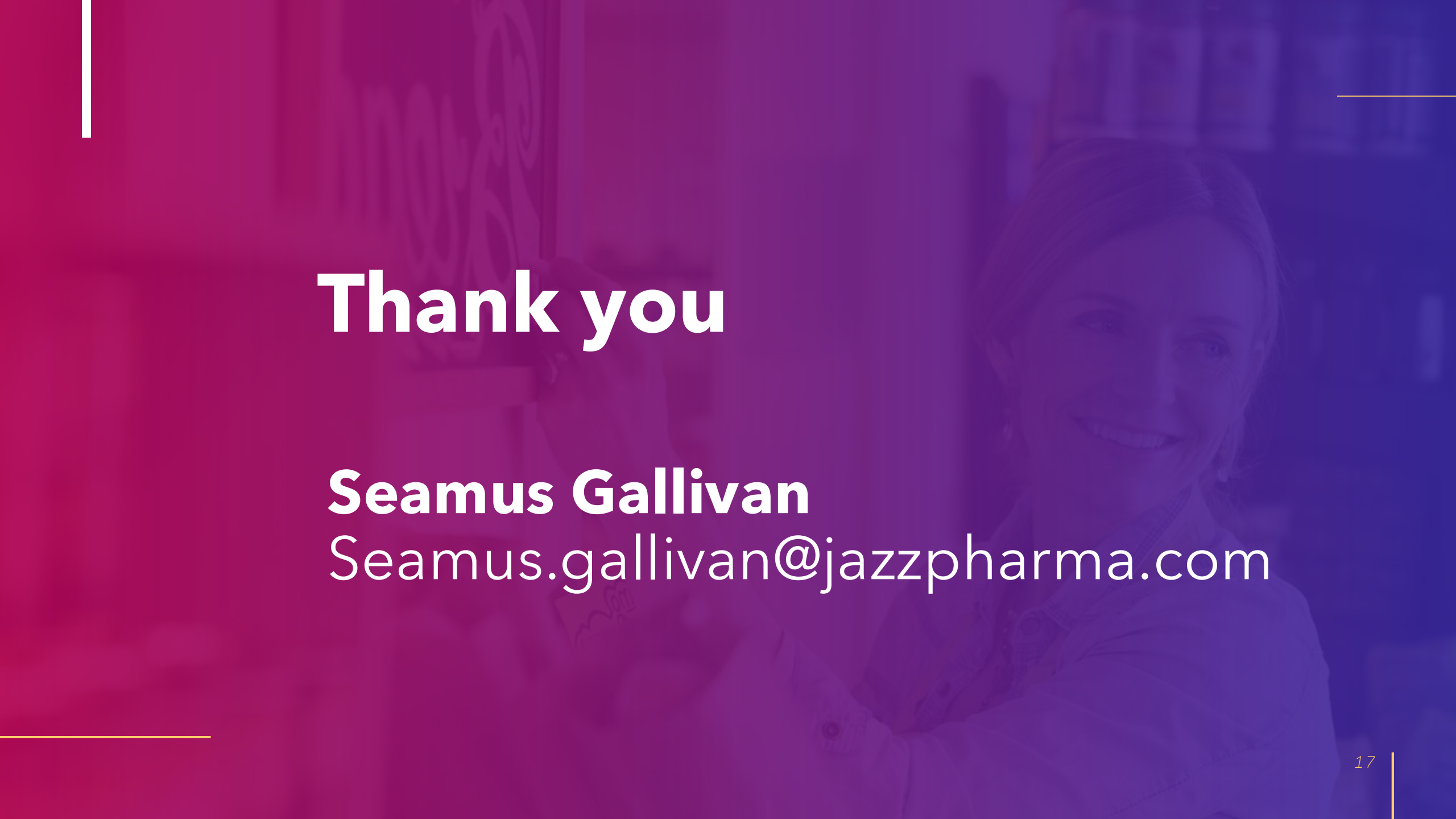
Chat Session
Demo



Performance
Review



Future Outlook



Thank you

Seamus Gallivan

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