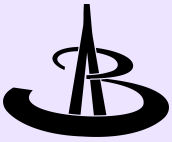

Inter IIT Tech Meet 13.0
Pathway Midterm Submission Guidelines

The midterm submission is a key checkpoint where teams are expected to demonstrate their understanding of the problem, the approach taken, and preliminary results. This stage helps teams validate their approach, gather feedback, and identify areas needing improvement.

Below are the details regarding the submission content, format, and evaluation criteria.

1. Submission Content

Teams should prepare the following elements for the midterm submission:

1.1. Approach Outline

- **Problem Understanding**: Very briefly provide a summary of your understanding of the Agentic Retrieval-Augmented Generation (RAG) problem statement and its challenges.
- **Use-Case Selection and Novelty**: Describe the specific use case you have chosen for your Agentic RAG system, highlighting its uniqueness and how it requires significant preparation beyond available examples.
- **Solution Overview**: Outline your proposed Agentic RAG system design, including core concepts, assumptions, and an explanation of your approach.
- **Background Study**: Mention any relevant literature, research, or technical references consulted to inform your solution.

1.2. Analysis and Initial Experiments

- **System Architecture**: Describe the overall architecture of your envisioned RAG pipeline, including components, data flow, and interactions.
- **Implementation Progress**: Provide information on any initial implementation steps taken, such as setting up Pathway, integrating agents, integrating Pathway VectorStore/DocumentStore, implementing retrieval logic, and error handling strategies.
- **Issues Addressed**: Discuss any specific technical issues or challenges you are looking to address with your Agentic RAG system.
- **Areas of Novelty**: Identify any potential areas of innovation in your approach that are not covered by existing solutions.
- **Preliminary Results**: Present any initial experiments or data supporting the viability of your system. This may include early test runs, performance metrics, sample outputs, or

observations about efficiency and cost. Discuss any issues encountered, refinements made, and insights gained from your initial experiments.

1.3. Progress Demo

- **Demonstration Videos (Optional)**: Submit videos showing:
    - **System Functionality**: Demonstrate the current functionality of your Agentic RAG system, such as handling queries, performing retrieval, generating responses, and dynamic decision-making.
    - **Challenges if any**: Show any errors that you're currently encountering and how you're addressing them. If you have a working pipeline, demonstrate its capabilities and explain your approach.
    - **User Interface**: If applicable, provide a walkthrough of any existing/envisioned UI components, highlighting user experience and features that enhance transparency or responsible AI practices.
- **Documentation**: Include a 1-3 page file that explains your approach, the current state of your project, how to replicate core aspects at jury's end if needed, and the direction you plan to take moving forward. This is specifically for implementation related intricacies.

1.4. Challenges and Next Steps

- **Technical Challenges**: Highlight any significant technical challenges encountered so far, including issues with integrating components, handling data, etc.
- **Next Steps**: Outline the key steps you plan to take for further development, including anticipated changes, testing, optimizations, or additional features.

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2. Submission Format

- Submit a PDF report (maximum 7 pages) (excluding index) containing the sections outlined above (section 1.1, 1.2).
- **Formatting Requirements**: Use either Helvetica or Garamond font (or LaTeX) with a minimum font size of 10 points and 1.15 line spacing.
- **Videos (Optional)** : Provide demonstration videos, ensure they are of clear quality and accessible
- **Code:** Submit code until latest progress. Any code should be accompanied with a README file with detailed instructions to replicate results. This should also include the architecture used, and any dependencies. This should compliment your approach and novelty mentioned in the report.

- **Documentation**: (Previously mentioned in 1.3) Proper documentation for code is required. This to understand your implementation.
- **Appendix (Optional)**: If you have additional images, screenshots, or supplementary material exceeding the page limit, you may include an appendix (maximum of 5 pages).

All content should be uploaded as a zip file. Further instructions will follow.

***Note**: All work presented must be original and not violate any copyright or intellectual property rights. Submissions may undergo plagiarism checks.*

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3. Evaluation Criteria

Your submission will be evaluated based on the following criteria:

Criteria	Description	Weight
Understanding of Problem Statement and Use Case Choice	Demonstrated understanding of the Agentic RAG problem and thoughtful selection of a novel and challenging use case.	25%
Clarity and Depth of Research on Existing Solutions	Thoroughness of background study, awareness of existing solutions, and identification of their limitations.	20%
Identified Potential Areas of Novelty	Innovation in approach, addressing gaps in current solutions, and proposing novel ideas or techniques.	25%
Technical Implementation Potential	Feasibility and soundness of the proposed technical solution, including architecture, implementation strategies, and problem-solving approaches.	20%
Report (Communication)	Clarity, organization, and readability of the written report and accompanying documentation.	10%
	Total	100%

Video (optional) and code is to aid grading and does not hold weightage in mid term evaluation explicitly.

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4. Submission Instructions

- **Deadline**: Midterm submissions are due by **12th November 2024, 11:59 PM**. All submissions must be turned in by the specified deadline. Late submissions will lead to point deductions according to the organizing team.
- **Submission Portal**: Details will be provided by the Inter IIT organizing team.
- **File Naming Convention**: Instructions will be provided by the organizing team.
- **Compliance**: Participants must ensure that all work presented in the reports is original and does not violate any copyright or intellectual property rights. The reports may undergo plagiarism checks.

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5. Feedback and Q&A

Following the midterm review, teams will receive feedback to help refine their approach for the final submission. Additionally, we might schedule a Q&A session with our representatives to address any concerns or provide further guidance. The bootcamp curriculum is also now live for everyone's access here.

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6. Tips for Resolving Doubts

- **Leverage Generative AI Wisely**: If you encounter difficult-to-comprehend error messages, consider asking the query on AI tools like Gemini or Bing AI Search.
- **Prepare for Doubt Sessions**: Use scheduled sessions (if any) to discuss conceptual or high-level challenges rather than minor bugs to make the best use of your time.
- **Utilize Community Channels**: Use your channel on Discord for assistance. However, direct answers may not be provided due to the nature of the competition.
- **Targeted Queries**: Identify where the gap is and ask doubts in the relevant community. For example, if the issue is with Docker or Streamlit, raise those queries on their respective support channels.
- **Use Docker to Avoid Dependency Issues**: It's strongly recommended to use Docker for consistent environments. Resources are provided to help you get started. A basic guide

for Docker is available here.

Note: All work presented must be original and not violate any copyright or IP rights.
We look forward to your innovative solutions and wish you the best in your development process!