
APPENDIX A DEFINITIONS, ACRONYMS, AND ABBREVIATIONS

1. Acronyms and Abbreviations

- ESA: End Semester Assessment.
- ISA: In-Semester Assessment.
- LLM: Large Language Model.
- NLI: Natural Language Inference.
- NLP: Natural Language Processing.
- QA: Question Answering.
- RAG: Retrieval-Augmented Generation.
- SRN: Student Registration Number.

2. Definitions of Key Terms

- **Context Conflict:** A risk factor where contradictions exist between different source documents, potentially confusing the model.
- **Context Scarcity:** A condition where the retrieved context is too sparse or brief, forcing the LLM to guess and fill in blanks from its internal memory.
- **Domain Mismatch:** A situation where retrieved documents are not semantically relevant to the user's specific query.
- **Hallucination:** A phenomenon where Large Language Models produce content that appears plausible but is factually incorrect, undermining reliability.
- **Proactive System:** A proposed system designed to efficiently predict the risk of hallucination *before* generating a response, rather than correcting it afterward.
- **Reactive Methods:** Current solutions that attempt to detect or fix hallucinations only after the text generation process is complete.

- **Retrieval-Augmented Generation (RAG):** A technique that grounds LLM responses in external documents to improve factuality.
- **Routing System:** An intelligent mechanism that assesses risk and dynamically directs queries to the most appropriate pathway (e.g., direct generation vs. RAG vs. human review).
- **SelfCheck GPT:** A specific reactive method that checks for consistency across multiple generated answers to detect hallucinations.