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SCHOOL OF ENGINEERING

DEPARTMENT OF AI & ML (IIIrd Year II Semester)

Application Development- web application with Natural Language Processing & IOT Explore (MR22-1CS0264)

Date:04/01/2025

Name of the Guide	Dr.D.Thiyagarajan	
Project Title	Domain-Specific Question Answering System Using NLP	
Project Title (Any Change)		
Section Name & Batch Number	Zeta ZT-06	
Batch Student Details	**Roll No**	**Student Name**
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Abstract Work	Closed-Domain Question Answering (QA) systems are specialized applications of Natural Language Processing (NLP) designed to deliver precise and efficient responses within a specific domain, such as healthcare, legal, or technical fields. These systems utilize advanced NLP techniques to comprehend user queries, retrieve relevant data, and provide accurate answers from curated datasets or structured knowledge bases. In contrast to open-domain QA systems, closed-domain systems focus on limited datasets, enhancing accuracy and relevance while reducing noise. The architecture of these systems typically includes components for question classification, information retrieval, and answer extraction, often powered by transformer-based models like BERT or fine-tuned versions tailored to specific domains. Integration with structured knowledge graphs and domain-specific corpora further boosts the system's performance. Key challenges include ensuring high-quality datasets, handling complex domain-specific terminologies, and maintaining contextual understanding of queries. Closed-domain QA systems are widely applicable in automating tasks such as customer support, professional consulting, and decision-making processes. They provide scalable solutions for accessing domain-specific information, significantly improving efficiency and accessibility. As advancements in NLP and machine learning continue, these systems are poised to play a crucial role in industries that demand accurate, domain-focused knowledge retrieval.	

GUIDE **AD MENTOR** **AD COORDINATOR** **DEAN**