IKP-Interactive Knowledge Portal

ABSTRACT

In academic institutions, an immense amount of effort goes into creating resources such as lecture notes, tutorials, research papers, seminar presentations, project reports, and best-practice guides. However, these valuable materials often remain scattered across platforms, making them hard to locate and reuse. Faculty members frequently recreate presentations and materials for similar topics due to the lack of a centralized system, leading to wasted time and effort. At the same time, countless mini projects, main projects, and seminars with innovative ideas are archived every year without any mechanism to revisit, improve, or build upon them.Interactive Knowledge Portal (IKP) offers a transformative solution by acting as a centralized Content Management System for academic resources. It organizes and preserves all academic materials in a single platform while utilizing AI-powered tools to make accessing and reusing resources smarter and more efficient. With features like AI-driven summarization, faculty can quickly extract key points from lengthy documents and presentations, saving time while preparing for lectures or research. The human-like natural language search allows users to easily find materials by asking intuitive queries such as, “Find lecture slides on neural networks” or “What are the key projects on renewable energy?”IKP also ensures that resources like lecture materials, tutorials, and past seminar content remain accessible and reusable for future batches. This reduces redundancy, promotes consistent learning experiences, and fosters the reuse of high-quality academic content. Additionally, archived projects with potential for enhancement or research extension can be identified, encouraging innovation and collaboration among students and faculty.By addressing the problem of scattered resources and time-consuming duplication, IKP provides an effective and practical solution. It empowers faculty to maximize the value of their hard work, enables students to explore academic content more deeply, and establishes a dynamic ecosystem of knowledge sharing and reuse. With its AI-driven functionality and centralized access, IKP is the tool institutions need to modernize and streamline their academic workflows.

SOFTWARE SPECIFICATION

- Python 3.10+
- Django
- MySQL 8.0
- OpenAI GPT

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