RAJIV GANDHI PROUDYOGIKI VISHWAVIDYALAYA, BHOPAL

Credit Based Grading System

Computer Science and Engineering VII-Semester

CS-7004 Elective-III (3) Modern Information Retrieval

1. Introduction: Information versus data retrieval, the retrieval process, taxonomy of Information Retrieval Models.

2. Classic Information Retrieval Techniques: Boolean Model, Vector model, Probabilistic Model, comparison of classical models. Introduction to alternative algebraic models such as Latent Semantic Indexing etc.

3. Keyword based Queries, User Relevance Feedback: Query Expansion and Rewriting, Document preprocessing and clustering, Indexing and Searching: Inverted Index construction, Introduction to Pattern matching.

4. Web Search: Crawling and Indexes, Search Engine architectures, Link Analysis and ranking algorithms such as HITS and PageRank, Meta searches, Performance Evaluation of search engines using various measures, Introduction to search engine optimization.

5. Introduction to online IR Systems, Digital Library searches and web Personalization.

Text Books

1. Ricardo Baeza-Yates and Berthier Ribeiro-Neto, "Modern Information Retrieval" Pearson Education
2. C. Manning, P. Raghvan and H. Schutze, "Introduction to Information Retrieval", Cambridge University Press.

Reference Books

1. Amy N. Langville and Carl D. Meyer, "Google's PageRank and Beyond: The Science of Search Engine Rankings", Princeton University Press

2. Pierre Baldi, Paolo Frasconi and PadhraicSmythe, "Modelling the internet and the web: Probabilistic methods and Algorithms", John Wiley