



NARASARAOPETA ENGINEERING COLLEGE (AUTONOMOUS)
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

2025-2026

Batch Number	DB-6
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Guide	Y. Chandana M. Tech
Title	Image Retrieval From Given Prompt
Domain/Technology	DEEP LEARNING
Base Paper Link	https://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=10319653
Dataset Link	https://www.kaggle.com/datasets/bsanjay2025/imageclef
Software Requirements	Browser: Any latest browser like Chrome Operating System: Windows 7 Server or later Python (COLAB)
Hardware Requirements	SystemType: Intel Core i5 or above RAM: 8 GB Number of cores:5 Number of Threads: 4
Abstract	<p>This project presents a deep learning-based semantic image retrieval system with an achieved accuracy of 70%. It uses a GP-Tree for hierarchical clustering and constructs a neighbor graph to reduce search space, enhanced by a Self-Organizing Map (SOM) for better clustering. An extended ontology with auto-generated SPARQL queries enables semantic image retrieval. Tested on WANG and Image CLEF datasets, the method shows strong performance. Future improvements like transformers, ensemble models, and data augmentation aim to further increase accuracy.</p>

Signature of the student(s)

Signature of the Guide

Signature of the project coordinator