

Legal Document Summarization Using NLP for Fast Case Analysis

Abstract:

Legal professionals deal with extensive case law documents, making **manual analysis time-consuming**. This project develops an **NLP-based summarization system** that extracts essential information from legal texts while maintaining their original intent and legal validity. The system integrates **LexRank, BART, and legal domain-specific transformers (Legal-BERT, CaseLaw-BERT)** to provide accurate **extractive and abstractive summaries**.

Methodology:

- **Legal Text Preprocessing:** Handling domain-specific terminology and citation formats.
- **Summarization Models:** Extractive (TF-IDF, TextRank) and Abstractive (BART, Pegasus).
- **Evaluation Metrics:** ROUGE scores, legal expert validation, and coherence testing.

Outcome:

The system **reduces legal document review time by over 50%** while maintaining case integrity. It is applicable in **law firms, judicial review processes, and contract analysis**, improving efficiency in legal research and decision-making.