Project Proposal

on

SUM IT UP

In partial fulfillment of requirements for the degree of

BACHELOR OF TECHNOLOGY

IN

COMPUTER SCIENCE & ENGINEERING

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SHRI VAISHNAV VIDYAPEETH VISHWAVIDYALAYA, INDORE

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COVER LETTER

Dear, Mentor

Thanks so much for taking the time to share the details of your research project with us today. I wanted to send over this research proposal as a follow up to our call to further outline how we can use information processing and machine learning to help your project succeed.

As I'm sure you know, computer science and artificial intelligence have changed the way we can collect data for projects like yours. Based on our initial assessment of your current capabilities, we believe that our intelligence systems can provide data and information that will further enhance pattern analysis within your research area.

Please review the enclosed documentation and let us know if you have any questions regarding our process and/or how we might apply machine intelligence to your academic research.

Sincerely,

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Project Management Team

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3. **Akshat Maheshwari**, 19100BTCSAII05240, Front-End
4. **Manan Jain**, 19100BTCSAII05267, Front-End

This project aims to develop a system for text manipulation and minimization while preserving the original meaning of the content. The system will use advanced NLP techniques to analyse the text, identify redundant or unnecessary information, and remove it without affecting the overall message. The end goal is to produce concise and efficient text while maintaining its original meaning.

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ABSTRACT

This project employs Natural Language Processing (NLP) techniques to summarize text data and manipulate textual information. The NLP algorithms used include text pre-processing, text representation, summarization, and data manipulation methods. The goal of the project is to condense large amounts of text into a more concise and manageable form while still retaining the key information and context. Additionally, the project also enables the manipulation of textual data to add, remove, or modify specific parts of the text. The results demonstrate the efficiency and effectiveness of the NLP-based approach in summarizing text and manipulating textual data.

OBJECTIVE

The goals of this project are:

- To develop an NLP-based system for summarizing text data that effectively condenses lengthy text into a shorter, more concise version while retaining the key information and context.
- To implement NLP techniques, including text pre-processing, text representation, summarization algorithms, and data manipulation methods, to achieve the goal of summarization and manipulation of textual data.
- To evaluate the effectiveness of the NLP-based approach in summarizing text data and manipulating textual information.
- To provide a user-friendly interface for inputting text data and generating summarized output.
- To continuously improve the NLP-based system through further refinement and development of the algorithms and techniques used.

PROJECT WORK

This project is a cutting-edge technology that leverages the power of Natural Language Processing (NLP) and integrates it with React and Django.

The front-end of the application is built using React, a JavaScript library for building user interfaces, which provides an intuitive and interactive experience for users. The back-end is powered by Django, a high-level Python web framework that enables efficient and scalable data handling.

The NLP component of the technology performs text analysis and summarization, condensing lengthy text into a more manageable form while still preserving the important information and context. The NLP algorithms used in this project include text pre-processing, text representation, and summarization techniques such as extraction and abstraction-based methods.

The integration of React, Django, and NLP provides a seamless and efficient platform for text summarization and manipulation. The user-friendly interface and the robust back-end infrastructure enable easy and reliable data handling, making it an ideal solution for a variety of applications in fields such as information management, content analysis, and text mining.

DEPLOYMENT

This project will be deployed locally, meaning it will be accessible and running on the user's own computer or network. This deployment option will provide several benefits, including improved privacy and security, better control over the environment, and faster performance compared to cloud-based deployments.

The local deployment will ensure that sensitive data remains within the user's control, and there will be no need for an internet connection to access the application. Additionally, the local deployment will also provide greater flexibility for customizing the project to meet specific needs and requirements. The deployment process and required resources will be documented thoroughly to assist users in setting up and running the project on their own local environment.