# SEMINAR ABSTRACT

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## Natural Language Processing (NLP)

**Introduction**

This project explores the capabilities of NLP in solving real-world problems. And aims to enhance the customer experience in a virtual bookstore by utilizing NLP techniques. The goal is to develop a system that can process and analyze human language, making it possible to understand and generate natural language text. NLP techniques such as text summarizing and others will be utilized to build a comprehensive and versatile system. The end goal is to provide an innovative and user-friendly solution for an online bookstore.

**Text summarizing using nlp**

Developing an automated text summarization system. The system will analyze a given text and extract the most important information, reducing it to a shorter and condensed form while preserving the key meaning and context. This will be achieved through the use of advanced Natural Language Processing (NLP) techniques, such as extractive summarization and abstractive summarization. This will help the user to read the summarized contend.

Summarizing the content has several advantages, including:

* Time-saving: Summarizing allows you to quickly understand the main points and themes, saving you time compared to reading it in its entirety.
* Improved comprehension: Summarizing can help you better understand and retain the information.
* Better organization: Summarizing can help you organize your thoughts and identify the key points, making it easier to recall and reference later.
* Increased retention: By summarizing and condensing the information in a book, you can increase your retention of the material and improve your ability to recall it in the future.

**Sentiment Analysis of Book Reviews Using VADER and Plotly**

Sentiment analysis is a common task in natural language processing that aims to automatically identify the emotional tone of a text. In this seminar, a Python-based approach to perform sentiment analysis on book reviews using the VADER (Valence Aware Dictionary and sentiment Reasoner) tool and visualize the results using Plotly.

Sentiment analysis has several advantages, including:

* Better Marketing Strategies: Sentiment analysis can help store owners identify the most popular and well-received books, authors, genres, and themes among their customers. They can use this information to create targeted marketing campaigns, promotions, and recommendations that resonate with their audience and increase sales.
* Improved Customer Satisfaction: By analyzing the sentiment of book reviews, store owners can gain insights into customer opinions. They can use this information to identify areas of improvement, address customer concerns. This can lead to higher customer satisfaction, loyalty, and retention.
* Time and Cost Savings: Automated sentiment analysis using tools like VADER can save store owners time and resources compared to manual analysis.

**Book Search Using Image Recognition and NLP**

Searching for a specific book can be a challenge, especially when the user doesn't know the exact title or author. In this seminar, we present a novel approach to book search that combines image recognition and natural language processing (NLP) techniques. Here users can upload a picture of a book cover, which is then processed to extract the text from the image. The extracted text is then tokenized and cleaned using NLP techniques such as stop word removal. We then use a combination of keyword matching and fuzzy search to identify the book title and author from the extracted text.

Advantages are:

* Convenience: Users can easily search for books by taking a picture of the cover or typing in keywords
* Accuracy: Image recognition and NLP technology can accurately identify book titles and authors, reducing the risk of user error in inputting search terms.
* Speed: Searching for books through image recognition and NLP can be faster than manual search, especially if the user is unsure of the exact title or author of the book.
* Improved book discovery: Help users discover books they may not have found through traditional search methods.