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**Technical or journal Report: Text Processing Techniques in Python (Module 2: Lab 03)**

Introduction

Overall, this lab provided me with a basic introduction to using GloVe word embeddings and highlights their usefulness in capturing semantic relationships between words.

Observations:

* Pre-trained Embeddings: I learned about leveraging pre-trained GloVe word embeddings, saving time and resources compared to training from scratch.
* Word Vector Representation: I explored how words are represented as numerical vectors in a high-dimensional space, capturing semantic meaning and relationships.
* Cosine Similarity for Word Comparison: I understood a general concept of cosine similarity as a technique to compare word vectors, quantifying how "close" two words are based on the angle between their vectors.
* Introduction to NLP Applications: I got a glimpse of how word embeddings can be used for NLP tasks, laying the groundwork for exploring their use in machine learning models for tasks like sentiment analysis or text classification.
* Exploration Opportunities: The lab gave me the opportunity to identify areas for further exploration, including visualizing word embeddings, analyzing more complex relationships, and applying them to real-world NLP tasks.

Learning outcomes:

* This lab provides me with a springboard for understanding word embeddings and NLP.
* It equips me with the basics and ignites curiosity to explore further, encouraging independent learning and experimentation.
* Pre-trained word embeddings open doors to efficient and effective NLP tasks.
* Cosine similarity offers a valuable tool to analyze semantic relationships between words.
* There's a vast potential for applying word embeddings in various NLP applications.

Conclusion:

This exploration highlights the value of pre-trained word embeddings and cosine similarity for analyzing semantic relationships in NLP tasks.