Diary Entry - Week 14

Date: 14-10-2024 to 18-10-2024

Summary:

Week 14 delved deeper into natural language processing (NLP), transitioning from latent semantic analysis to latent Dirichlet allocation (LDA) and exploring LDA word embeddings.

Latent Semantic Analysis (LSA) to Latent Dirichlet Allocation (LDA):

- Explored the transition from latent semantic analysis (LSA) to latent Dirichlet allocation (LDA) as methods for topic modeling and dimensionality reduction in text data.
- Discussed the underlying principles of LDA, including topic modeling as a generative process and the Dirichlet distribution for modeling the topic distributions.

Latent Dirichlet Allocation (LDA) Word Embeddings:

- Investigated LDA word embeddings as a technique for representing words in vector space based on their co-occurrence patterns within documents.
- Explored the application of LDA word embeddings in various NLP tasks, including document classification, information retrieval, and semantic similarity.

Coding Challenge - Week 10:

- Participated in the coding challenge focusing on LDA and word embeddings.
- Implemented LDA topic modeling and explored the generation of word embeddings using LDA techniques.