

# Analysing Employee Objectives using Topic Modeling with Word Embedding

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- Introduction: Problem Statement
- Solution
- Background: Topic Modeling
- Background: Word Embeddings
- Research Questions
- Dataset Description
- Approach & Expected Outcome
- Timeline



CEO or HOD

- **What are the main Objectives of my Employees?**
- **what Proportion of my employees have which objectives?**
- **Which employees have the same career goals?**
- **Do the objective of the employees match with that of the company?**

# Solution: Topic Modeling



K = 1



K = 2



K = 5



- Traditional Topic modeling techniques:

## Latent Dirichlet Allocation

- Probabilistic Graphical Models
- Corpus representations

## Latent Semantic Analysis

- Singular Value Decomposition
- TF-IDF Score

## Non-negative Matrix Factorization

- Linear-algebraic model
- Document-word Matrix

## Drawbacks

1. context loss in terms of stop words, stemming and lemmatization
2. words with same meanings treated differently

## Drawbacks of Traditional Topic Modeling Techniques + Solution with Word Embeddings

1. context loss in terms of stop words, stemming and lemmatization

**Word Embeddings include the full sentence, no context lost**

2. words with same meanings treated differently

**Embedding vector of words with similar meaning lie closer to each other in the latent space.**

- **Research Question 1:**

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Could combining traditional Topic Modeling techniques with state-of-the-art word embeddings led to better results?

- **Research Question 2:**

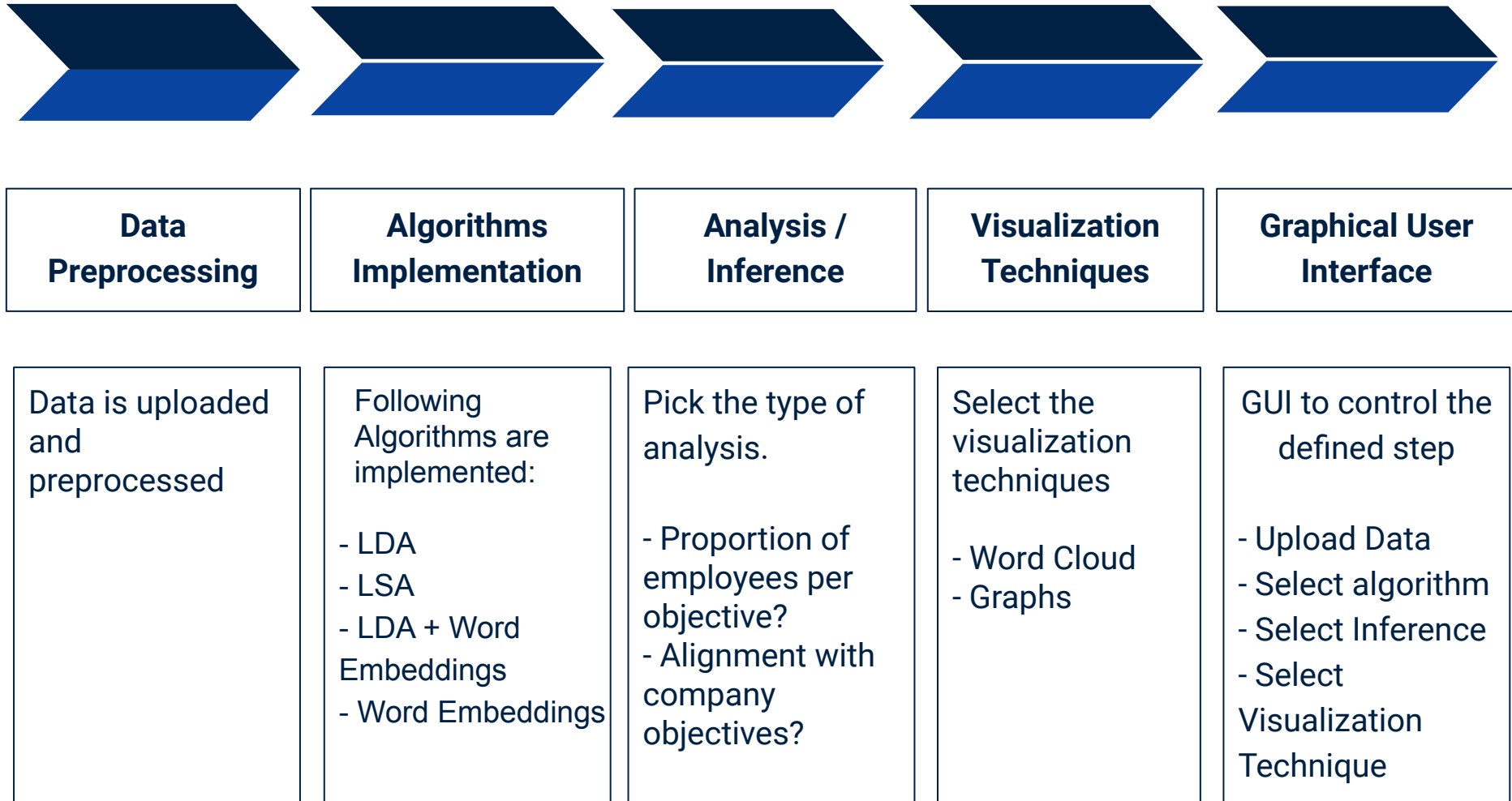
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Which type of word embedding would be better for our task?

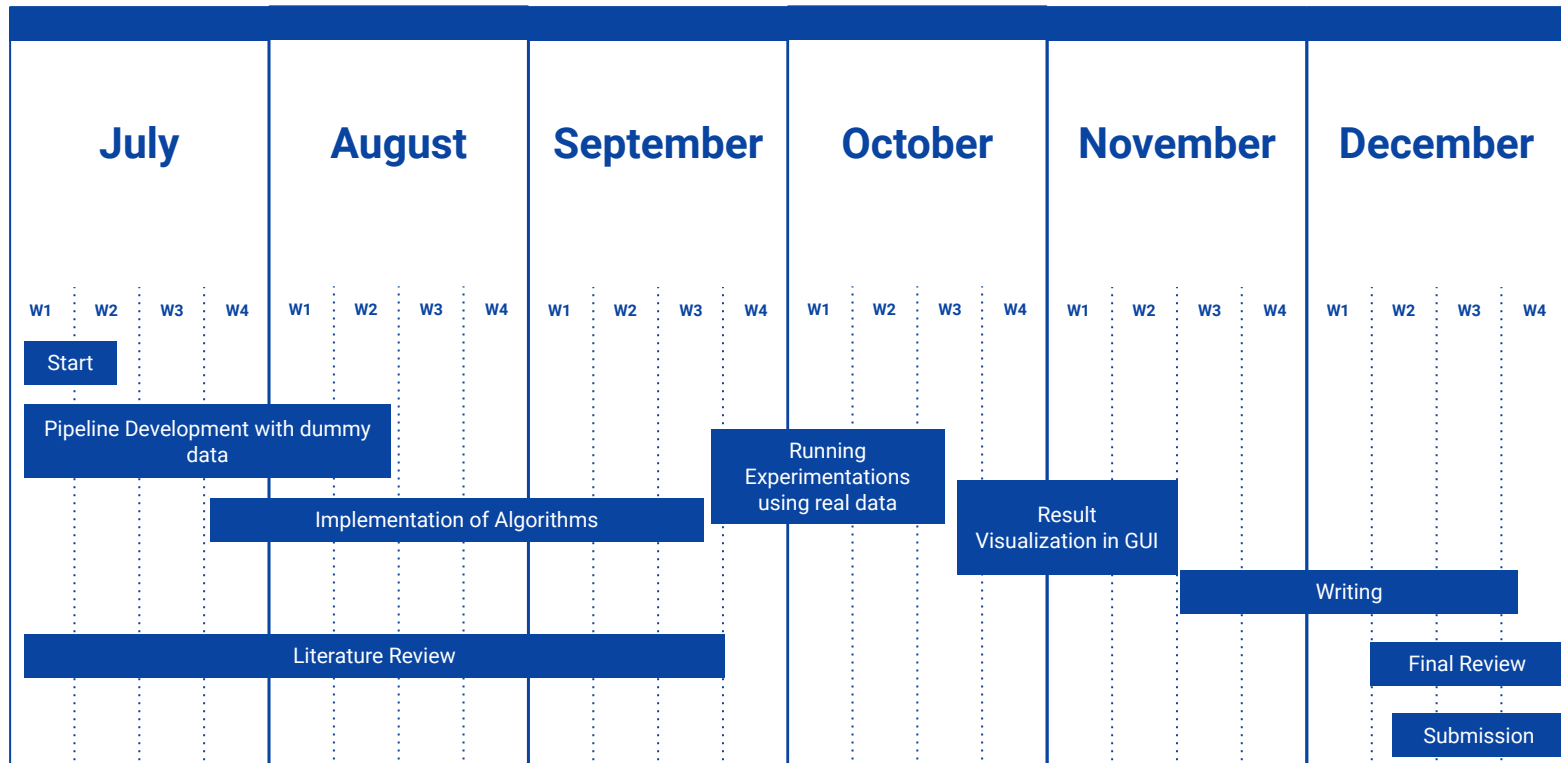


Attribute Name	Sample data
User ID	*100001
Global Key	HR
Functional Area	Human Resources
Location	Lyon
Objective Name	Ensure delivery of an efficient and compliant recruitment service
Objective Comment	KPI's are met by end of year. Pascale came back from sick leave fully engaged and took high volume of requisitions immediately and increased use of LI for posting posts, sharing articles and making comments. Visibility of Pascale on LI is clearly progressing.
Objective Metric	1)Time to fill and time to offer: reduction of 5% = TTO 88 & TTF 96 2)Team/individual to fully comply with ATS and job posting processes and guidelines, including: <ul style="list-style-type: none"> <li>* Cross border hire requirements</li> <li>* Quality, attractiveness and accuracy of job postings</li> <li>* Use of the Merck term in job ads</li> <li>* Use of hashtags in LinkedIn posts</li> </ul>
Form Template Name	2019 Performance Management





# Project Timeline



**Questions?  
Comments?**



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