



**Project Title :**

# Job Recommender



**Technologies:** NLP, Deep Learning



# Group 15 : Team members

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# Problem Statement and Motivation

- Traditionally, job suggestion has been thought of as a filter-based match or a recommendation based on the characteristics of positions and candidates as independent entities.
- We can apply this approach that uses machine learning to utilise the advancement of applicant job selection.
- Additionally, we can propose some suggestions which are made up of multiple recommendations that are beneficial for the end user.
- Our Goal here is to create a machine learning model using NLP techniques to find the best job that is suited for the employee based on his skills/profile.

**Supporting articles/papers/open source project for the job recommender project using NLP and Deep Learning.**

- ❑ [Job Recommender systems using NLP](#)
- ❑ [Training deep Neural Networks](#)
- ❑ [Neural Architectures for Named Entity Recognition](#)
- ❑ [Teaching machines to read](#)
- ❑ [Natural Language Understanding](#)
- ❑ [Natural Language Processing \(almost\) from Scratch](#)
- ❑ [TensorFlow API Documentation](#)
- ❑ [Keras API reference](#)

# Project Modules

- **Web Scraping:**

We will be creating the dataset by scrapping from different platforms like Glass Door, LinkedIn, Naukri etc.

- **Data Cleaning/Transformation:**

We will scrape the raw data using Webdriver and later transform this data into useful format by using preprocessing techniques and NLP techniques.

- **Model Development/Evaluation using Neural Networks:**

In this module, we create our own neural network using the tensorflow and keras library and train the neural network on the data filtered.

- **Testing and Deployment:**

In this module we test our model's results and try to improvise the model using parameter tuning.

# WORK DISTRIBUTION AND CONTRIBUTION OF TEAM MEMBERS FOR 2ND REVIEW

- Setting up project environment and Installing required libraries ( Khadyothan and Chetan )
- Finding, Downloading and Modifying Dataset to our needs ( Bhargava.K, Bhavesh, Bharghav Sai.P )
- Preprocessing and NLP :
  - IT dataset ( Bhavesh , Bhargava.K, Khadyothan )
  - nonIT dataset ( Chetan and Bharghav Sai.P )
- Creating a model - ( Bhavesh , Bharghav Sai.P, Chetan, khadyothan, Bhargava.K )



# Tools and Libraries Used :

## Data collection :

- Beautiful Soup( Raw data scraped from indeed.com )

## Data cleaning and processing using NLP :

- Natural Language Toolkit (NLTK) and PorterStemmer for Stemming
- Numpy, Pandas, Re.

## Model Development:

- Tensorflow and Keras



**Github link for the project :** <https://github.com/bhavesht20/job-recommender>

**Work Plan :**

**Second Review**

Data Collection  
Data wrangling  
Data preprocessing

**Project Documentation**

Project Idea  
Description  
Motivation.

Model Development  
Model Evaluation  
Model Deployment

**First Review**

Made Documentation which we'll be updating  
time to time. Made a clear work flow of the  
project

**Final Review**