

RESUME SCREENING USING AI AND MACHINE LEARNING

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RESUME SCREENING

Resume screening is the process of reviewing and evaluating job applications, including resumes, cover letters, and other materials, to determine if a candidate meets the requirements for a specific job.

Purpose:

The primary goal of resume screening is to narrow down a pool of applicants and identify the most promising candidates for further consideration, like interviews.

Methods:

Recruiters and hiring managers use various methods, including:

Manual review: Reading and assessing resumes based on experience, skills, and qualifications.

Automated screening: Utilizing software or AI to scan resumes and identify keywords, qualifications, and other criteria that match the job requirements.

PROBLEM STATEMENT:

- The current manual process of resume screening is labor-intensive, time-consuming, and susceptible to bias, failing to efficiently handle the volume and diversity of job applications. This necessitates innovative approach to automate and enhance the screening process. Leveraging Natural Language Processing (NLP) and Machine Learning (ML.) technologies, this study proposes a system aimed at improving the accuracy, efficiency, and fairness of candidate selection, addressing the pressing need for a scalable and unbiased recruitment solution in the digital age.

PROJECT OBJECTIVES:

- 1.EFFICIENCY AND SPEED
- 2.OBJECTIVE EVALUATION
- 3.CANDIDATE MATCHING
- 4.SKILL IDENTIFICATION
- 5.IMPROVED CANDIDATE EXPERIENCE
- 6.REDUCED HR BURDEN
- 7.COST SAVINGS
- 8.DATA ANALYSIS

NECESSITY : STAKEHOLDERS:

AI and machine learning-powered resume screening is necessary to streamline the hiring process, improve efficiency, reduce bias, and enhance the candidate experience, ultimately leading to better talent acquisition outcomes.

The primary stakeholders in resume screening using AI and machine learning are companies and organizations using the technology for hiring, recruiters and HR professionals, and job applicants.

DATASET

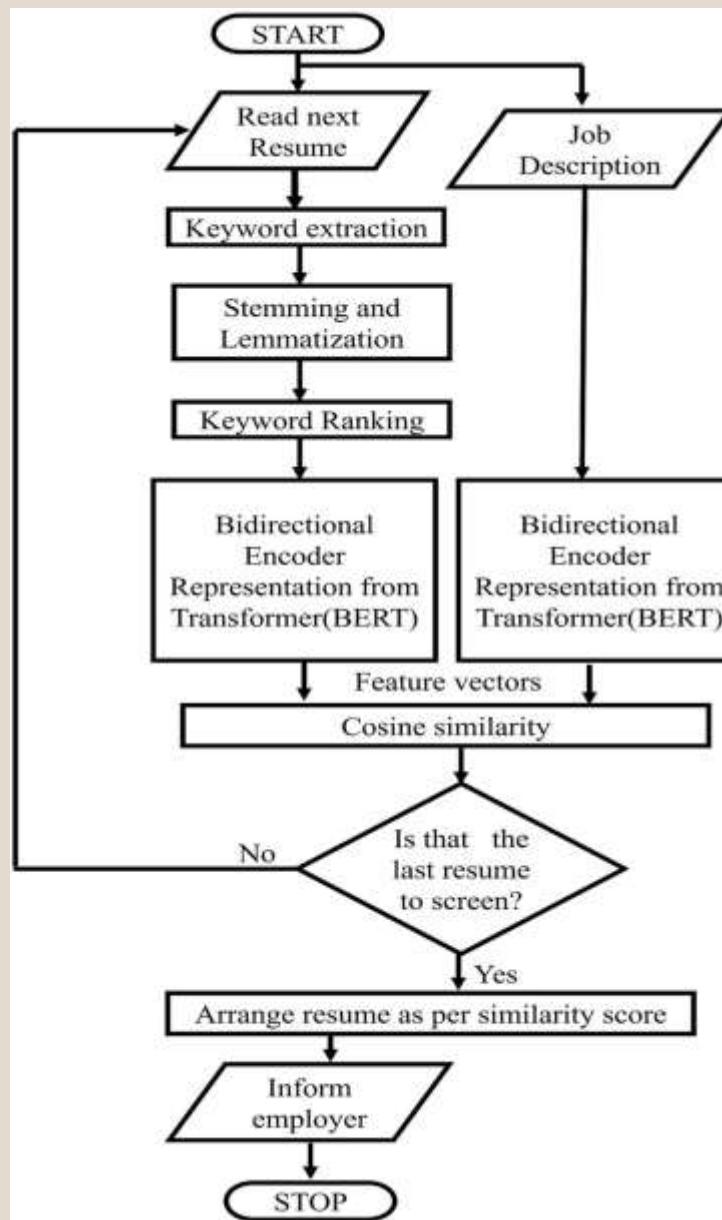
<https://www.kaggle.com/cod/e/gauravduttakiit/resume-screening-using-machine-learning>

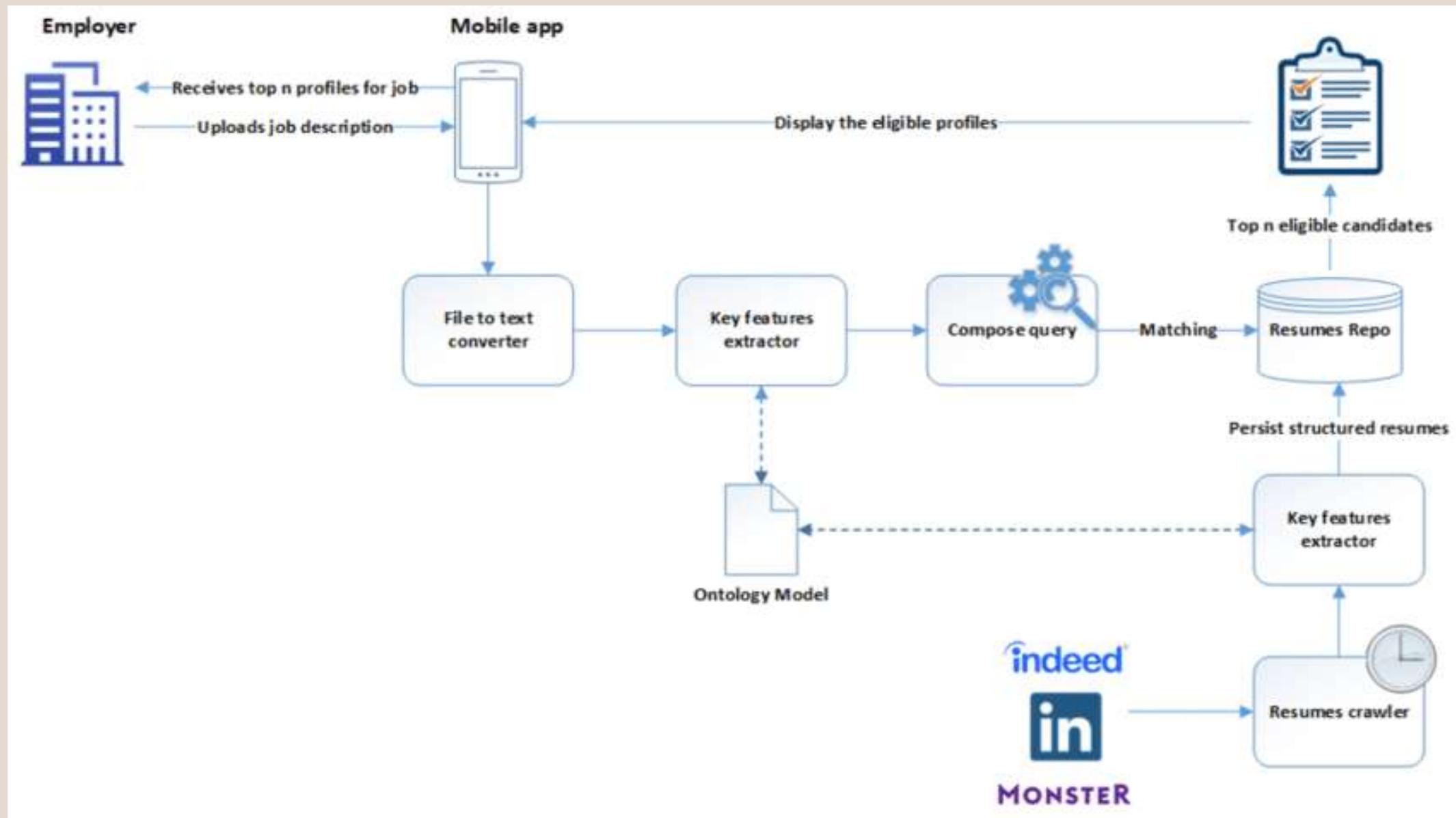
<https://www.kaggle.com/datasets/gauravduttakiit/resume-dataset>

MODELS:

- **Artificial Neural Networks (ANNs):** Used for advanced classification tasks. After processing resumes into numerical representations (e.g., through embeddings), ANNs can learn patterns to predict job categories.
- **Convolutional Neural Networks (CNNs):** Although CNNs are primarily designed for image data, they can be adapted for text classification by identifying spatial patterns in word embeddings.
- And also we use some machine learning models like Logistic regression, SVM, Random Forest and knn

APPLICATION DIAGRAM





FUTURE PLAN OF ACTION

- 1. Integration with Evolving Technologies
- 2. Standardization Across Platforms
- 3. Predictive Analytics for Career Mapping
- .4 Customized Hiring Pipelines
- 5. AI-Assisted Skill Assessment:

The background features abstract, organic shapes in muted colors. On the left, there's a large, rounded shape in a reddish-brown hue. Above it, a cluster of thin, light brown lines resembling stylized leaves or feathers extends upwards. On the right side, a large, open, white-lined circle overlaps a light beige shape.

thank you