**Use case 6**

**Domain: Human Resource**

**Case- Enhancing Candidate Screening with AI in an ATS**

**Context:**

Company receives thousands of job applications for various positions every month. Their HR team struggles to efficiently screen and shortlist candidates due to the sheer volume of applications.Applicant Tracking Systems (ATS) use **Natural Language Processing (NLP)** to analyze resumes by parsing and understanding the text and content within resumes. Here's how ATS systems employ NLP for this purpose.

**Data Collection**

* **Text Extraction**: When a candidate submits a resume, the ATS first extracts the text from the document. This involves converting the resume, which may be in various formats like PDF, Word, or plain text, into a machine-readable format.
* **Tokenization**: NLP algorithms then break down the extracted text into individual words or tokens. This step is crucial for further analysis because it allows the system to understand the structure of the document.
* **Part-of-Speech Tagging**: The system identifies the part of speech (e.g., noun, verb, adjective) for each token. This helps in understanding the role of words in sentences and context.
* **Named Entity Recognition (NER)**: NER is used to identify and classify entities mentioned in the resume, such as names of people, organizations, dates, and locations. This can help the ATS recognize company names, universities, job titles, and other key information.
* **Keyword Extraction**: ATS systems use NLP to identify important keywords and phrases relevant to the job description and qualifications. This step helps in matching candidates with specific job requirements.
* **Semantic Analysis**: NLP algorithms analyze the meaning and context of words and phrases within the resume. This allows the system to understand the relationships between different pieces of information, such as skills, experiences, and qualifications.
* **Sentiment Analysis**: In some cases, ATS systems may perform sentiment analysis to determine the overall tone of the resume, such as whether it conveys enthusiasm or negativity.
* **Matching and Ranking**: After analyzing the content of the resume, the ATS compares the extracted information with the job requirements and qualifications specified in the job posting. The system assigns a relevance score to each candidate based on how closely their qualifications match the job criteria.
* **Presentation to Recruiters**: The ATS presents the ranked list of candidates to recruiters or HR personnel, highlighting the most relevant candidates for further consideration. Some systems also provide a breakdown of how each candidate's qualifications match the job posting.

**Conclusion**

By using NLP techniques, ATS systems can efficiently process and analyze resumes to identify the most qualified candidates for a given job opening. This automation significantly reduces the manual effort required for resume screening and allows HR professionals to focus their time and attention on evaluating the most promising applicants.