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SECTION : F  
DATE : 29-01-2026

### **Category 3: Analysis & Extraction (The "Smart" Agents)**

#### **10. Smart Resume Parser Goal:**

Upload a resume text and automatically extract specific fields: Name, University, Company. Tech: pipeline('ner') to find PER (Person) and ORG (Organization) entities.

#### **Abstract:**

This project presents a Smart Resume Parser that automatically extracts key information such as Name, University, and Company from unstructured resume text using Natural Language Processing (NLP). A pre-trained Named Entity Recognition (NER) model is used to identify relevant entities, and rule-based classification is applied to organize the extracted data into meaningful categories. The system reduces manual effort in resume analysis and provides structured output from raw textual input.

#### **Documentation:**

Resumes are unstructured text documents containing personal, educational, and professional details. Manually extracting this information is inefficient and not scalable. Named Entity Recognition (NER) is an NLP technique that can identify entities such as names of people and organizations from raw text, making it suitable for automated resume analysis.

In this project, I implemented a Smart Resume Parser using a pre-trained NER model from the Hugging Face Transformers library. The system processes resume text as input and extracts PERSON entities to identify the candidate's name, while ORGANIZATION entities are used to detect universities and companies.

Keyword-based rules are applied to distinguish educational institutions from workplaces. The final extracted information is displayed in a structured format for easy interpretation and further use.

## Output:

```
: resume_text = """
John Doe
Email: john.doe@email.com

Education:
Bachelor of Technology in Computer Science
Indian Institute of Technology Bombay

Experience:
Software Engineer at Google
Intern at Microsoft
"""
```

```
{'Name': 'John Do',
 'University': ['Indian Institute of Technology'],
 'Company': ['Microsoft', 'Google']}
```