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AT82.05 Artificial Intelligence: Natural Language Understanding (NLU)

A4: Resume Parser

In this assignment, you will create a resume parser. Users will upload their resume in PDF format, and the system will output a list of unique skills and education details in order.

Note: You are ENCOURAGED to work with your friends, but DISCOURAGED to blindly copy other's work. Both parties will be given 0.

Note: Comments should be provided sufficiently so we know you understand. Failure to do so can raise suspicion of possible copying/plagiarism.

Note: You will be graded upon (1) documentation, (2) experiment, (3) implementation.

Note: This is a one-weeks assignment, but start early.

Deliverables: The GitHub link containing the jupyter notebook, a README.md of the github, and the folder of your web application called 'app'.

Task 1. Implementation Foundation: - Based on 03 - Resume Parsing.ipynb, modify as follows:

1) Extend the resume parser code based on the spaCy class used in our class sessions. Do not use pre-built solutions from the internet. (1 points)
2) Implement additional features or improvements inspired by spaCy's capabilities in natural language processing. (1 points)

Note: Ensure that the enhanced parser builds upon the spaCy-based code to maintain consistency and prevent plagiarism.

Task 2. Resume Parsing Features - Web Application Development: - Develop a simple web application that showcases the capabilities of extraction. (3 points)

1) Ask the user to upload a PDF, taking inspiration from Affinda[1].
2) Extract and output not only unique skills but also additional details such as work experience, certifications, and contact information.
3) Present the extracted information in a structured format, and provide options for users to download the results, such as in **Excel format** or as **a table** on the web page.

As always, the example Dash Project in the GitHub repository contains an example that you can follow (if you use the Dash framework).

Best of luck in HR Screening!

[1] https://www.affinda.com/