RMIT
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COSC2820 Advanced Programming for Data Science

COSC 2820/2815
Assignment 2: NLP Web-based Data Application
Milestone II: Web-based Data Application

Assessment Type	Individual assignment. Submit online via Canvas→Assignments→Assignment 2→ Milestone II: Web-based Data Application. Marks awarded for meeting requirements as closely as possible. Clarifications/updates may be made via announcements/relevant discussion forums.
Due Date	Week 13, Sunday 23rd Oct 2022, 11:59pm
Marks	10

1. Overview

This assessment description concerns Milestone II of the NLP web-based data application project.
In Milestone I, we have built several machine learning models based on different feature representations of documents to classify job advertisement categories. In Milestone II, we will develop a job hunting website based on the Python Flask web development framework. The developed website will allow job hunters to browse existing job advertisements, as well as employers to create new job advertisements. The website will adopt one of the machine learning models that we built in Milestone I, for the purpose of auto classifying categories for new job advertisement entries. Such functionality helps to reduce human data entry error, increase the job exposure to relevant candidates, and also improve the user experience of the job hunting site.

2. Learning Outcomes

This assessment relates to following learning outcomes of the course:
- CLO 5: Document and maintain an editable transcript of the data pre-processing pipeline for professional reporting;
- CLO 6: Build small to medium scale data-driven applications using a Web development framework.

3. Assessment details

In this milestone, you are required to build a job hunting website using Python Flask.

Job Data
To test and demonstrate the functionality of job displaying, you will need some job data. In this milestone, you can use data, including the job information and descriptions, given in Milestone I. If you want, you can also create any additional artificial data (e.g. images) for the purpose of display.

Website Layout and Design
The layout and design of the website are flexible. You can refer to the exercises in the last two weeks' material, or the Job Browsing Page and the Employer site of the commonly used Seek.com.au as a reference. Note that the Employer site would require an seek account login to enter.

Minimum Functional Requirements

There are minimum functional requirements of the developed website for job hunters and employers, respectively. You feel free to include other functionalities that suit.

Functionality for Job hunters

[Fun 1] Job Display
The Job hunting website will allow job hunters to see all the available job advertisements. In the homepage, the develop website should provide a list view of the available job advertisement **previews**, and when the users click on the previews, they will be able to see the full description of the job advertisement. The job hunting website will also display job advertisements per category. When users click on each category, they will be able to see a list view of the available job advertisement previews within this category, and when users click on the previews, they will be able to see the full description of the job advertisement.

Functionality for Employers

[Fun 2] Create a New Job Listing
The Job hunting website will allow employers to create a new job listing, including entering various information, e.g., title, description, salary, etc.
Based on the entered title and description, the website should automatically recommend categories of the entered job advertisement. It should also allow the employer to select other categories if the recommendation does not suit (i.e. they can overwrite the category suggested by the website). You can refer to the employer site of seek.com.au as an example. Upon confirmation, the created job advertisement should be included in the job data, and can be found via a URL or relevant search.
Note that you have the flexibility to choose the language model and the classification model for the job category recommendation task.
For the sake of simplicity, we do not need to create any employer login or verification functionalities.

Record Demo Videos
As part of the final submission, you are required to submit a pre-recorded 5-min video, demonstrating the working system for various functionalities.

6. Marking Guidelines

Marking Criteria

Marking of this milestone will consider the design & layout and the implementation of the website.

Mark Allocations
- Design & Layout [1%]
- Implementation of functional requirements [6%]
    - [Fun 1] Job Browsing (3%)
    - [Fun 3] Create a New Job Listing (3%)
- Demo Video [3%]

4. Submission

The final submission of this milestone will consist of:

- The python source code of the developed website, as well as files/data that are required to locally host the website.
    - Note, the assessor will re-run your code. Please make sure all necessary files to run your code are included in your submission. If some files are too large, you can put them in a OneDrive link, and put the link in a README.txt file to be included in the submission.
    - All source code will be passed to a plagiarism checker to ensure academic integrity.
- A pre-recorded 5-min demo video. If your video is too large to upload to canvas, you can also put it in OneDrive and share the link along with your submission.
- Put all the above mentioned files in a folder, named with your student id, Zip the folder with the same name (i.e., **<student_number>.zip**) and upload for submission

Assessment declaration:
When you submit work electronically, you agree to the assessment declaration:
https://www.rmit.edu.au/students/student-essentials/assessment-and-exams/assessment/assessment-declaration

Late Submission Penalty
Late submissions will incur a 10% penalty on the total marks of the corresponding assessment task per day or part of day late. Submissions that are late by 5 days or more are not accepted and will be awarded zero, unless special consideration has been granted. Granted Special Considerations with a new due date set more than 2 weeks after the original due will automatically result in an equivalent assessment in the form of a practical test with interview, assessing the same knowledge and skills of the assignment (location and time to be arranged by the instructor). Please ensure your submission is correct (all files are there, compiles etc), re-submissions after the due date and time will be considered as late submissions.

5. Academic integrity and plagiarism (standard warning)

Academic integrity is about honest presentation of your academic work. It means acknowledging the work of others while developing your own insights, knowledge and ideas. You should take extreme care that you have:

- acknowledged words, data, diagrams, models, frameworks and/or ideas of others you have quoted (i.e. directly copied), summarised, paraphrased, discussed or mentioned in your assessment through the appropriate referencing methods,
- provided a reference list of the publication details so your reader can locate the source if necessary. This includes material taken from Internet sites.

If you do not acknowledge the sources of your material, you may be accused of plagiarism because you have passed off the work and ideas of another person without appropriate referencing, as if they were your own.

RMIT University treats plagiarism as a very serious offence constituting misconduct. Plagiarism covers a variety of inappropriate behaviours, including:

- Failure to properly document a source
- Copyright material from the internet or databases
- Collusion between students

For further information on our policies and procedures, please refer to https://www.rmit.edu.au/students/student-essentials/rights-and-responsibilities/academic-integrity