START OF QUIZ
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Academic honesty is essential to the continued functioning of the University of British Columbia as an institution of higher learning and research. All UBC students are expected to behave as honest and responsible members of an academic community. Failure to follow the appropriate policies, principles, rules, and guidelines of the University with respect to academic honesty may result in disciplinary action.

I agree that all answers provided are in my own words, and that I will not discuss the contents of this quiz with any of my fellow students until after the exam period has completed for everyone. Furthermore, any response that used generative AI tools has been rephrased into my own interpretation, and has been appropriately cited.

Signature: _____

Question 1

Topic: Lecture 5
Source: Lecture 5

Imagine you have a block of text with paragraphs separated by blank lines. How would you use regex to find the start of each paragraph? What assumptions would you make about the formatting of the text? (1)

Question 2

Topic: Lecture 7
Source: Lecture 7

In class, we built a POS tagger that tries to give a majority tag to a word; if it's out-of-vocabulary, it backs-off to Regexes. This is clearly overly simplistic. List two assumptions that are being violated by this model. (1)

Question 3

Topic: Lecture 5
Source: Lecture 5

There are two ways of matching a pattern against the start of a string. Describe them. (1)

Question 4

Topic: Lecture 7
Source: Lecture 7

What is the difference between a stem and a lemma? What impacts does that have on our algorithms? (1)

Question 5

Topic: Lecture 6
Source: Lecture 6

XML can be opened by most plain-text text editors. Name a benefit and a disadvantage of this feature. (1)

Question 6

Topic: Lecture 8
Source: Lecture 8

Imagine that you're working with a linguist who is not very good with technology. They store all of their data in .docx files, scattered across their desktop. What arguments would you make for them to convert to .tsv or .json, and how would you alleviate their worries that they wouldn't be able to access or modify their information (no, you can't teach them Python)? (2)

Question 7

Topic: Lecture 8
Source: Lecture 8

In class, I mentioned that we always want to close a file correctly. Beyond freeing up system resources, it also "flushes the buffer", which ensures that any current read or write operations that are in the job queue, but haven't yet been processed, are completed. Knowing what you do about encodings, what is a possible ramification of not flushing the buffer? Explain at least 2. (2)

Question 8

Topic: Lecture 6
Source: Lecture 6

Suppose you've trained a Named Entity Recognition (NER) model using XML-annotated text data, but it consistently fails to recognize locations. What steps would you take to determine if the problem lies with the model, the training data, or both? What resources would you need to investigate further? (2)

Question 9

Topic: Long
Source: Lecture 7

Suppose you're building a text classification model for a highly inflected language like Finnish. How might you approach preprocessing tasks such as lemmatization or stemming? Would you perform these tasks before or after feature extraction, and why? Discuss how the choice of sequence may impact the quality of the features and model accuracy. Would you make the same decision for sentiment analysis? (3)

END OF QUIZ