# Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

# Final Exam

Format: short answer, 2-4 sentences per question.

## Python Basics

1. What is a loop in Python? What does it do? Name one example of something you can do using a loop.
2. What is an if-statement in Python? How does it work? Name one example of something you can do with an if-statement.

## Text Analysis

1. What is tokenizing? Why would we tokenize a text before doing text analysis?
2. What is text cleaning? What are things that need to be cleaned in a text prior to text analysis? Pick one of these things and explain in detail why it should be cleaned.
3. Re-write what this sentence would look like after cleaning: It was the best of times, it was the worst of times
4. Pick one function from NLTK, like similar() or concordance(), and explain what it does. Why is the function useful for text analysis?

## Text Generation

1. How does a computer know what words tend to be associated with a single word, like monster or woman, for example?
2. Why is bias and discrimination a problem in large language models? Where do models “learn” to be biased?
3. Why is it difficult to train a model that isn’t biased or discriminatory?
4. What is the most important thing you learned in this class, and why is it important to you?