School of Computer Science Engineering and Technology

Course- B.Tech.
Course Code- CSET204
Year- 2024-25
Date-12-08-2024

Type- Core
Course Name- Probability and Statistics
Semester- ODD
Batch-

Lab (Week-3)

Note: First two questions you have to finish in the lab itself.

Q1. From the following list = ["I",”am”,"Studying","in","BU"], Randomly sample 1500 words. For the word “BU” collect the immediate right neighbour word, call it as a sample space for the word “BU”. Now compute the probability of all words in the sample space for the word “BU”.

Q2. Four coins are tossed simultaneously. Let X denote the number of times the coin comes up with heads. Compute the probabilities for all possible values of X (within Lab).

Expert Level Question:

For the following dataset, print a sentence probabilistically.

We love the world and the things in it.

We love the way cheetah runs.

We have a man of honor.

We should be rich.

We are teenagers so we will be rebellion.

We are iconoclast and fighter.

We believe in education.

We love everything.

We watch a movie every day.

We hate pollution.

We love the work of god.

We love the beauty of this world.

We adore the way people try solve hard things.

You are nothing but a blade of grass.

We will unleash a lot of prophecies and will bring down hordes of legions unto this earth to destroy you.

We love doing things in a peculiar way.

We love and hate probability. It is so stupid and fun at the same time.

We love the way software programs work.

We love your room.

Goal

The system should take as input the number of words and the starting word. Rest the system should print a sentence on its own, i.e., you will type in a word and the program should tell me what the next possible word could be. For example, if I type the word 'I', the program should tell me that the next possible words could be: 1) hate 2) am 3) will 4) adore 5) hate 6) watch 7) believe (probabilistically in this order). We will call the order of words as ranking. Subsequently other words also.