Natural Language Processing Lab

Exercise 7:

Application: Sentence Compression

Dataset: Download the dataset from rl-sentence-compression (kaggle.com)

Task:

- Develop a model using RNN, GRU and LSTM to compress the sentences.
- Analyze the efficiency of these models.
- Compress the following input sentences and manually compare the output with the given summary. Finetune the hyper parameters to generate the summary that includes all the information.
    1. Input: New jobless numbers are a bit of a mixed bag for President Obama and his re-election bid.

Summary: New jobless numbers a mixed bag for Obama" Input: "New jobless numbers are a bit of a mixed bag for President Obama and his re-election bid.

    2. Input: A car filled with Christmas presents was stolen from a home in Melbourne\u2019s north-east on Christmas Day.

Summary: Car filled with Christmas presents stolen in Melbourne.

    3. Input: A mariachi band has serenaded Donald Trump on the sidewalk outside Trump Tower in New York City.

Summary: A mariachi band has serenaded Donald Trump.

    4. Input: Lena Dunham was taken to the hospital Saturday and will undergo surgery for a ruptured ovarian cyst, her spokeswoman said.

Summary: Lena Dunham Will Undergo Surgery For Ruptured Ovarian Cyst.

    5. Input: At least 13 people are reportedly dead and many more are seriously injured after a tour bus collided with a semi-trailer in California.

Summary: At least 13 dead after tour bus collided with semi-trailer in California.

    6. Input: A Chicago cop is being praised for his good deed after an image of him buying a homeless man Chipotle went viral.

Summary: Chicago cop praised for buying homeless man Chipotle

7. Input: Coffee could be extinct by 2080 because of the effects of climate change on coffee growing regions.

Summary: Coffee could be extinct by 2080 because of climate change.

8. Input: An American student and part-time model was found dead in her room at an Australian university, a police spokesman said.

Summary: American Student and Part-Time Model Found Dead at Australian University.

9. Input: The Apple Watch will be available in retail stores in two weeks, Apple announced Thursday.

Summary: Apple Watch Will Be Available In Stores In Two Weeks.

10. Input: The death of a teenager found in a North Austin parking lot with multiple cobra bites has been ruled a suicide.

Summary: Death of teenager found with cobra bites ruled suicide.

11. Input: A man has been charged with murder after a body was found in a home in Sydney's south yesterday.

Summary: Man charged with murder after body found in home in Sydney's south.

12. Input: Glen Campbell is suffering from Alzheimer\u2019s disease, the singer revealed to People.

Summary: Glen Campbell is suffering from Alzheimer\u2019s disease.

13. Input: Asbestos has been found in the charred remains of a beach house, gutted by a ferocious fire overnight in Palm Beach on Sydney's Northern Beaches.

Summary: Asbestos found in charred remains of beach house on Sydney's Northern Beaches.

14. Input: Paris Hilton Arrested for Cocaine in Las Vegas was arrested for possession of cocaine Friday night in Las Vegas.

Summary: Paris Hilton Arrested for Cocaine in Las Vegas.

15. Input: A body pulled from Lake Michigan has been identified as missing medical student Ambrose Monye, who disappeared weeks before his graduation, Chicago police confirmed to FoxNews.com Thursday.

Summary: Body pulled from Lake Michigan identified as missing medical student Ambrose Monye.