PROJECT TOPIC: Image Caption Generator Using CNN & LSTM

B.Tech. CSE Group No.: 16

Project Group Members:

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About the Project: In this project, we use CNN and LSTM to identify the caption of the image. As the deep learning techniques are growing, huge datasets and computer power are helpful to build models that can generate captions for an image. This is what we are going to implement in this Python based project where we will use deep learning techniques like CNN and RNN. Image caption generator is a process which involves natural language processing and computer vision concepts to recognize the context of an image and present it in English. In this survey paper, we carefully follow some of the core concepts of image captioning and its common approaches. We discuss Keras library, numpy and jupyter notebooks for the making of this project. We also discuss about flickr_dataset and CNN used for image classification.

Motivation: Every day, we encounter a large number of images from various sources such as the internet, news articles, document diagrams and advertisements. These sources contain images that viewers would have to interpret themselves. Most images do not have a description, but the human can largely understand them without their detailed captions. However, machine needs to interpret some form of image captions if humans need automatic image captions from it. Future work Image captioning has become an important problem in recent days due to the exponential growth of images in social media and the internet. As feature extraction and similarity calculation in images are challenging in this domain, there is a tremendous scope of possible research in the future.

Project Planning:

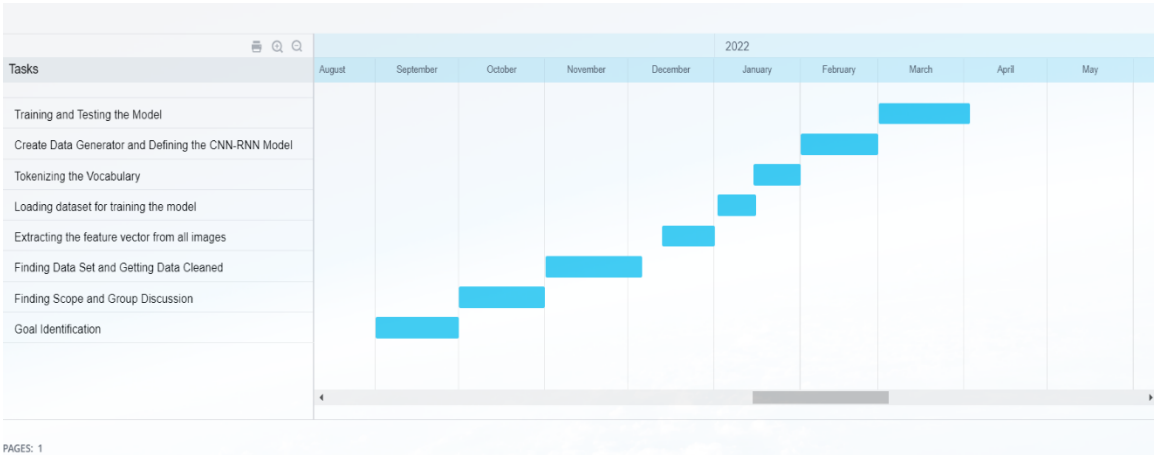

Figure-1: Gantt Chart of Project Work

This project requires good knowledge of Deep learning, Python, working on Jupyter notebooks, Keras library, NumPy, and Natural language processing.

Tools required:

- **Hardware Requirements:**
  Processor: Intel i5 processor
  RAM: 8GB
  Operating System: Any OS other than window 7
  Hard disk: 256GB

- **Software Requirements:**
  Anaconda
  Jupyter Notebook
  Python

Signature of Project Supervisor: _____