Project Planning Phase
Project Planning Template (Product Backlog, Sprint Planning, Stories, Story points)

Date	24 November 2023
Team ID	Team-591732
Project Name	Project – Image Caption Generator
Maximum Marks	8 Marks

Data Flow Diagrams:

A Data Flow Diagram (DFD) is a traditional visual representation of the information flows within a system. A neat and clear DFD can depict the right amount of the system requirement graphically. It shows how data enters and leaves the system, what changes the information, and where data is stored.
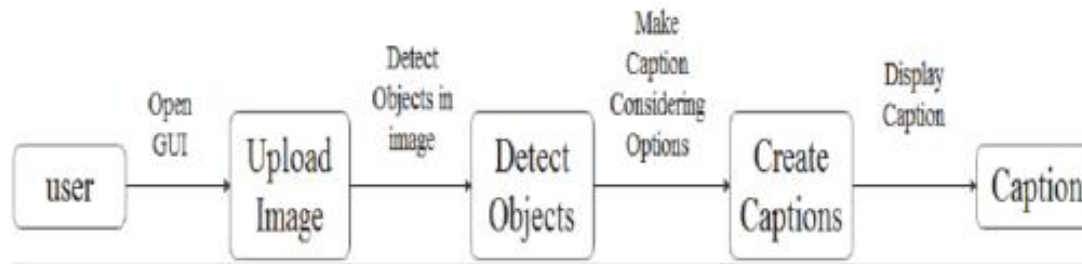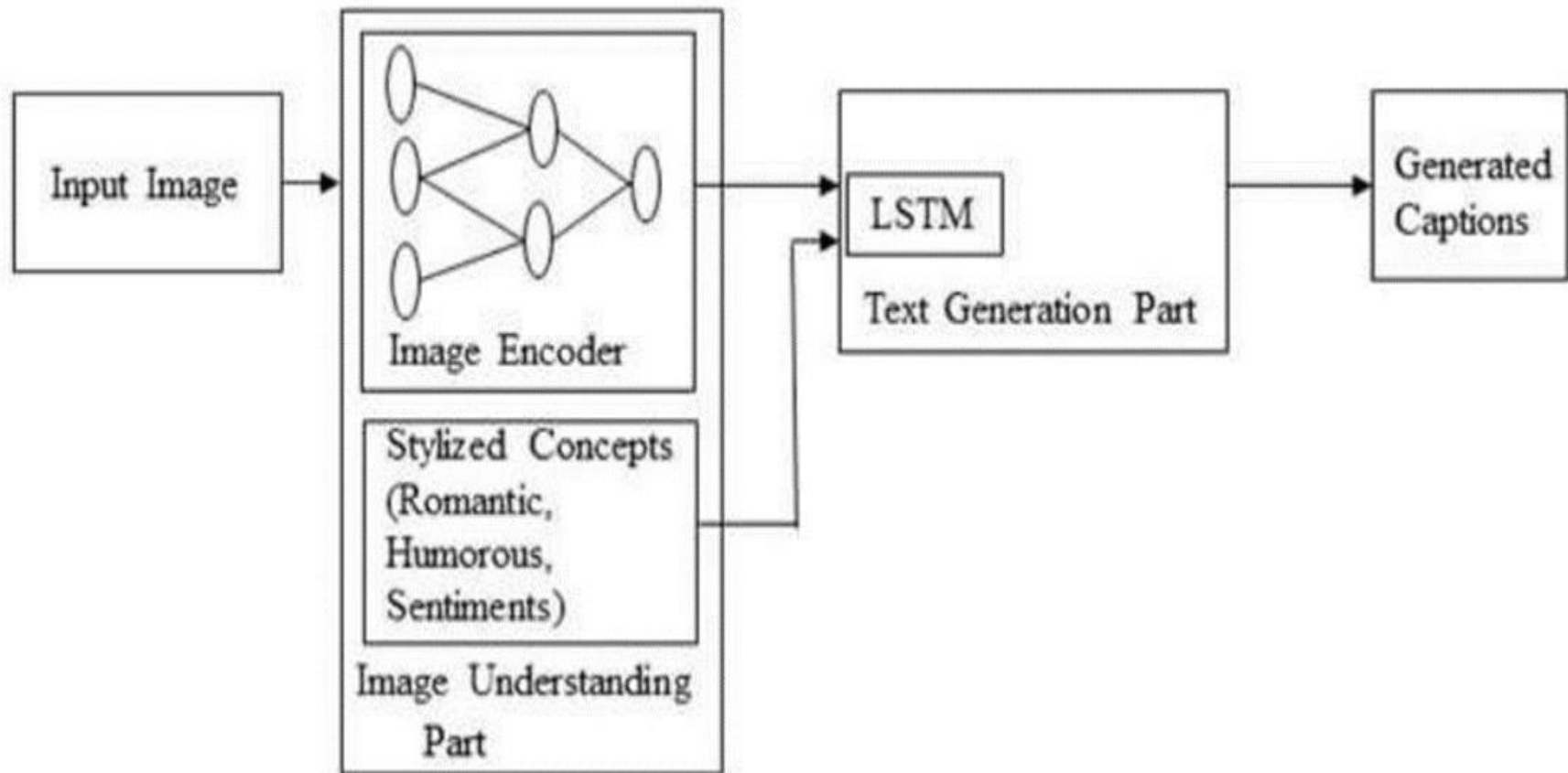
Figure1

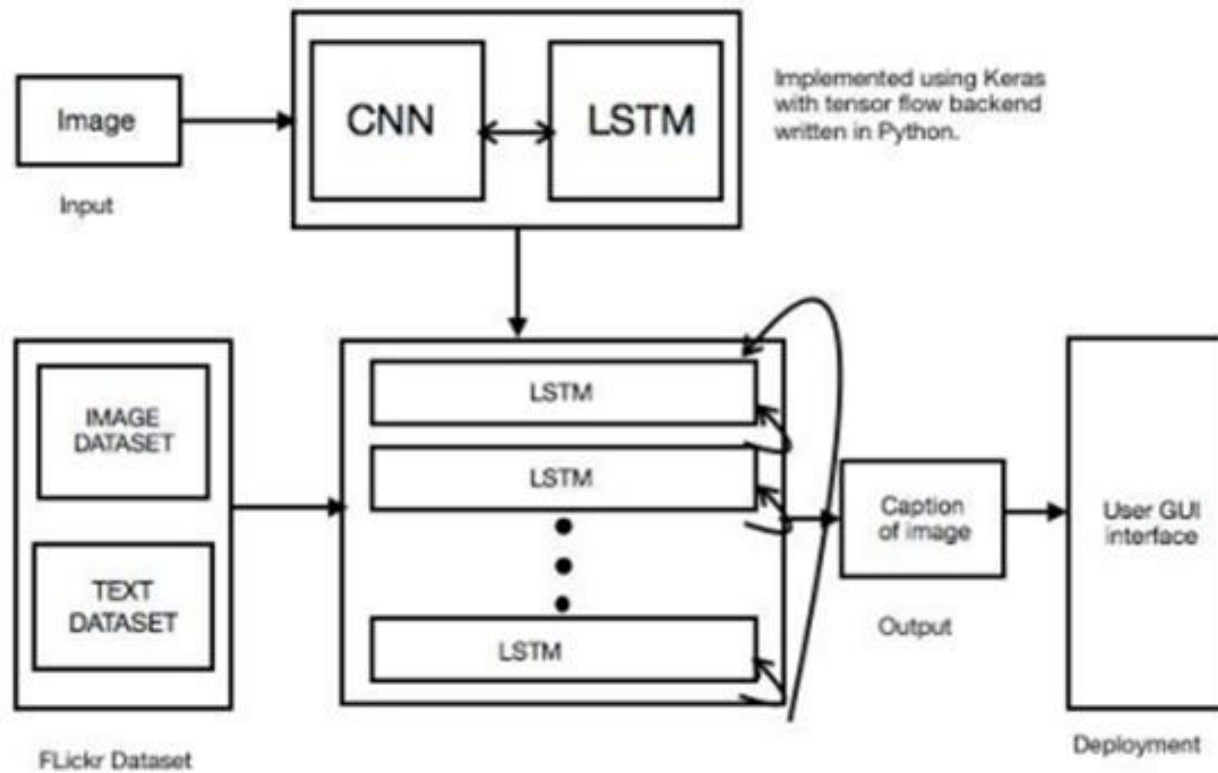**Figure2**

Figure3

Image

Input

CNN ↔ LSTM

Implemented using Keras with tensor flow backend written in Python.

IMAGE DATASET

TEXT DATASET

FLickr Dataset

LSTM

LSTM

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•
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LSTM

Caption of image

Output

User GUI interface

Deployment

image → VGG → Features

soft max → batch normalize → dropout → LSTM → concatenate

concat ← Embed, pos

Embed ← caption

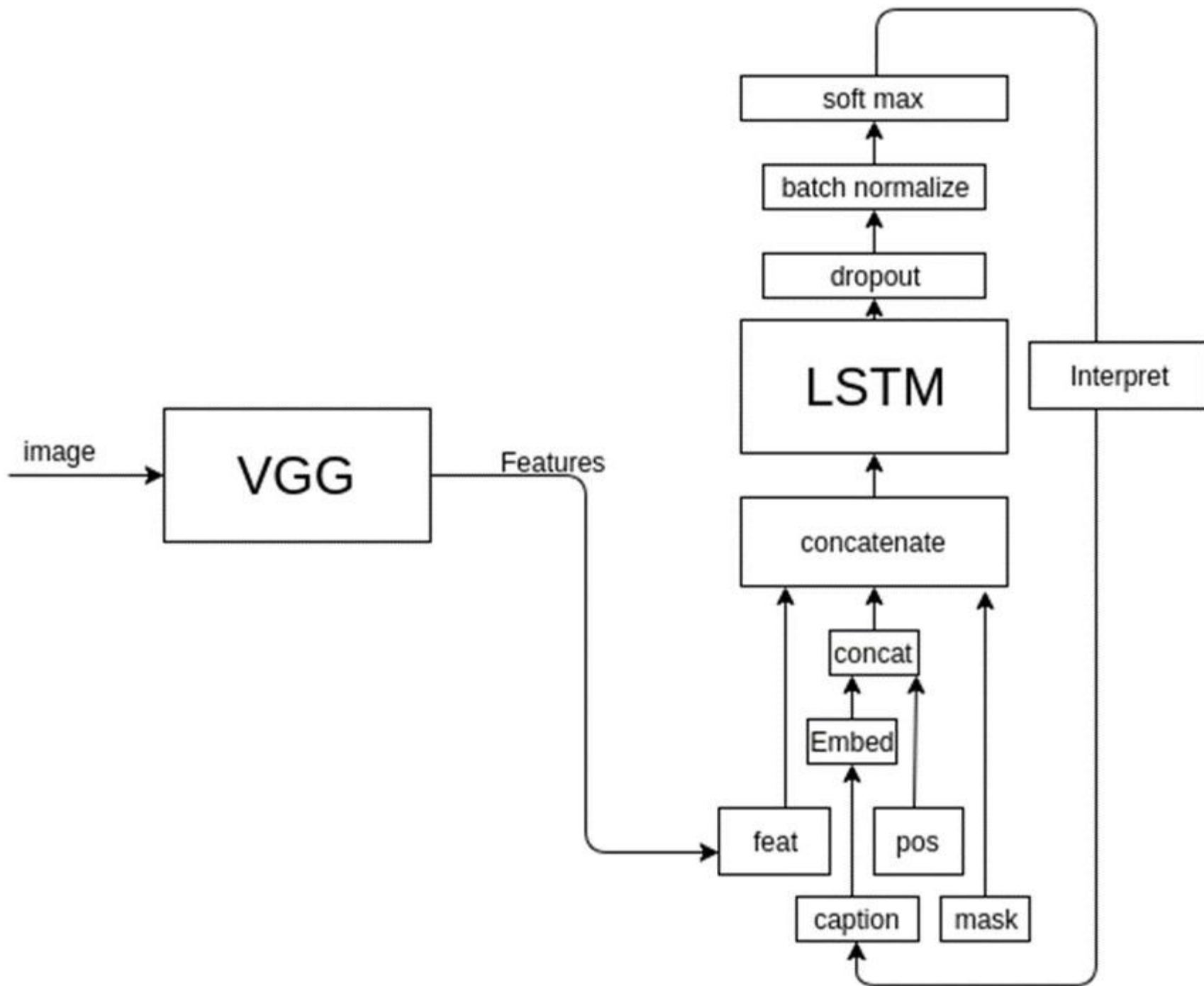feat ← caption

pos ← mask

Interpret

Product Backlog, Sprint Schedule, and Estimation (4 Marks)

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-1	Project setup & Infrastructure	USN-1	Set up the development environment with the required tools and frameworks to start the Image caption generator	2	High	Kelavath Balaji Naik,cheekatipalli Nandhini, irugu Sindhu
	development environment	USN-2	Gather a diverse dataset of images containing different types of garbage (plastic, paper, glass, organic) for training the deep learning model.	1	High	Kelavath Balaji Naik,Cheekatipalli Nandhini, Irugu Sindhu

	Data collection	USN-3	Preprocess the collected dataset by resizing images, normalizing pixel values, and splitting it into training and validation sets.	2	High	Kelavath Balaji Naik,Cheekatipalli Nandhini, Irugu Sindhu
	data preprocessing	USN-4	Explore and evaluate different deep learning architectures (e.g., CNNs) to select the most suitable model for garbage classification.	3	high	Kelavath Balaji Naik,Cheekatipalli Nandhini, Irugu Sindhu
	model development	USN-5	train the selected deep learning model using the preprocessed dataset and monitor its performance on the validation set.	3	high	Kelavath Balaji Naik,Cheekatipalli Nandhini,

	Training	USN-6	implement data augmentation techniques (e.g., rotation, flipping) to improve the model's robustness and accuracy.	4	high	Kelavath Balaji Naik,Cheekatipalli Nandhini, Irugu Sindhu

Sprint-2	proposed solution	USN-7	proposed the solution to bridge the gap between the between visual content and accessibility	2	Low	Kelavath Balaji Naik
	literature review	USN-8	synthesizing and critically analyzing relevant literature to establish the context, identify gaps, and highlight key findings	2	Medium	Cheekatipalli Nandhini
	video creation	USN-9	dynamic and engaging medium to convey the key aspects of the project	3	High	Cheekatipalli Nandhini
	brainstorming	USN-10	emphasizing the critical role played by these early stages in shaping the project's direction and ensuring alignment with stakeholder expectations	3	High	Kelavath Balaji Naik
	documentation	USN-11	detailing every aspect of the project	1	Medium	Irugu Sindhu

Sprint-3	Login	USN-12	in developing the login and sign-in pages, pivotal components	2	High	Kelavath Balaji Naik
	Login	USN-13	in developing the login and sign-in pages, pivotal components that ensure secure user authentication via facebook	2	High	Kelavath Balaji Naik

Sprint-4	model deployment & Integration	USN-14	deploy the trained deep learning model as an API or web service to make it accessible for garbage classification. integrate the model's API into a user-friendly web interface for users to upload images and receive image caption generator results	3	High	Kelavath Balaji Naik,Cheekatipalli Nandhini, Irugu Sindhu
Sprint-5	Testing & quality assurance	USN-15	conduct thorough testing of the model and web interface to identify and report any issues or bugs. fine-tune the model s	3	High	Kelavath Balaji Naik,Cheekatipalli Nandhini, Irugu Sindhu

Project Tracker, Velocity & Burndown Chart: (4 Marks)

Sprint	Total Story Points	Duration	Sprint Start Date	Sprint End Date (Planned)	Story Points Completed (as on Planned End Date)	Sprint Release Date (Actual)
Sprint-1	20	6 Days	22 Nov 2023	30 Nov Oct 2023	20	21 Nov2023
Sprint-2	20	6 Days	21 Nov 2023	30 Nov 2023	20	3 Nov 2023
Sprint-3	20	6 Days	20 Nov 2023	30 Nov 2023	20	11 Nov 2023
Sprint-4	20	6 Days	22 Nov 2023	30 Nov 2023	20	20 Nov 2023
Sprint -5	20	6 days	23 Nov 2023	30 Nov 2023	20	21 Nov 2023