Project Design Phase-II
Data Flow Diagram & User Stories

Date	03 November 2023
Team ID	Team-592055
Project Name	IMAGE CAPTION GENERATION
Maximum Marks	4 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.

Database

Retrieve Image-Caption Pair

Flask App

Process Uploaded Image

Image Caption Model

Load Model

Preprocess Image

Generate Caption

Store Image-Caption Pair

Predict Caption

User

User Uploads Image
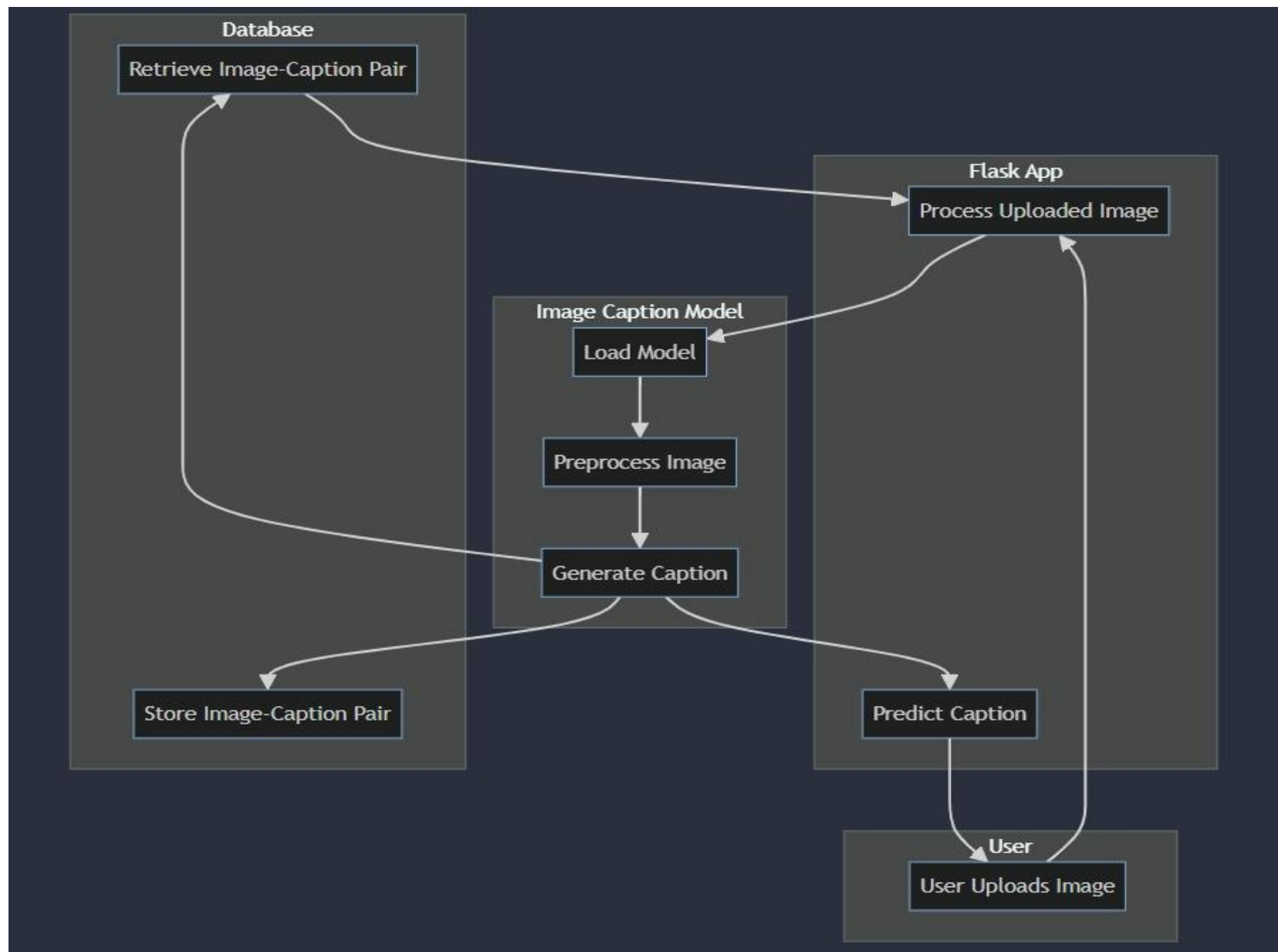
User Stories

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
End User	Image Upload	USN-1	As an end user, I want to upload an image for caption generation.	The system should allow users to upload image files.	High	Initial Release
End User	Customization	USN-2	As an end user, I want to customize the style and tone of the generated captions.	The system should provide options for caption customization.	High	Initial Release
Advanced User	User Access Additional Information	USN-3	As an advanced user, I want to view detailed information about the generated caption, such as confidence scores for individual words or phrases	The additional information should provide insights into the model's decision-making process. - The information should be presented in a clear and understandable way.	Medium	Later Release
Administrator	Model Training	USN-4	As an administrator, I want to initiate model training with new data.	The system should allow admins to upload new training data	High	Ongoing Release
Administrator	Monitor and Adapt Model Performance	USN-5	As an administrator, I continuously monitor the model's performance on real-world data and adapt it as needed to address new challenges or changing requirements.	The model should maintain high accuracy and relevance over time. The adaptation process should be efficient and minimize disruptions to user experience.	High	Ongoing Release
Administrator	Deploy and Scale the Model	USN-6	As an administrator, I deploy the model on a cloud-based platform to provide elastic scalability and handle increasing demand	The model should be able to handle a growing volume of requests without performance degradation. The deployment process should be automated and efficient.	High	Initial Release
End User	Multi-lingual Support	USN-7	As an end user, I want the tool to generate captions in multiple languages.	The system should include language selection options.	Medium	Later Release
Entrepreneur	Enhance Product Description Generation	USN-8	Utilize the image captioning model to generate detailed and engaging product descriptions for their online store.	The generated descriptions should accurately represent the product's features and benefits. The descriptions should be engaging and persuasive, encouraging potential customers to make	High	Later Release

				purchases.		
Accessibility Advocate	Promote Inclusive Design and Development	USN-9	Collaborate with accessibility experts to ensure that the image captioning model is developed and implemented in a way that is inclusive and accessible to all users	The model should be compatible with assistive technologies and screen readers. The captions should be provided in multiple languages and formats to accommodate diverse user needs.	High	Ongoing Release