

**Government of Karnataka**

**DEPARTMENT OF COLLEGIATE AND TECHNICAL EDUCATION**

**PROGRAM SPECIALIZATION PATHWAYCAPSTONE PROJECT**

**DEPARTMENT OF COLLEGIATE AND TECHNICAL EDUCATION**

Palace Road ,Bangalore560001,

# Karnataka

**DEPARTMENT OF COLLEGIATE AND TECHNICAL EDUCATION**

**Format-1**

**Capstone project Scope Document**

The capstone project scope clearly describes what the capstone project will deliver and outlines all the work required for completing the capstone project.

**Capstone project Title:**

**Image Caption Generation using Deep Learning Technique**

**Group Members:**

* + - 1. Amitha S
      2. Anushree T R
      3. Faiza Khanum
      4. Kousalya B S

**Problem Statement:**

Generating captions for images is a vital task relevant to the area of both Computer Vision and Natural Language Processing. Mimicking the human ability of providing descriptions for images by a machine is itself a remarkable step along the line of Artificial Intelligence. The main challenge of this task is to capture how objects relate to each other in the image and to express them in a natural language (like English). Traditionally, computer systems have been using pre-defined templates for generating text descriptions for images. However, 1 this approach does not provide sufficient variety required for generating lexically rich text descriptions.

**Objectives:**

1. Deals with image understanding and a language description for that image.
2. Generating well-formed sentences requires both syntactic and semantic understanding of the language.
3. Captions for every image on the internet can lead to faster and descriptively accurate images searches and indexing.
4. We encounter a large number of images from various sources such as the internet, news articles, document diagrams and advertisements.

**Capstone project description:**

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 .Image captioning is important for many reasons. Captions for every image on the internet can lead to faster and descriptively accurate images searches and indexing .image captioning has various applications in various fields such as biomedicine, commerce, web searching and military etc. Social media like Instagram, Facebook etc. can generate captions automatically from images.

**Capstone project Deliverables:**

1. A responsive design that ensures the application can be accessed on any device, including desktops, tablets, and smart phones
2. A user-friendly interface that makes it easy for visitors to navigate the website and find the information they need
3. Accessibility features that comply with web accessibility standards, such as alt tags for images and keyboard navigation

**Key milestones:**

Phase 1: Literature Survey

Phase 2: Project Analysis and Project Architecture

Phase 3: Project Design and implementation

Phase 4: Project Testing and Deployment

**Constraints:**

1. **Time:**

The time constraint means project's schedule for completion, including the deadlines for each phase of the project, as well as the date for roll out of the final deliverable. Here we have four months’ time to deliver the project.

**2. Quality:**

The quality means characteristics of the deliverable or product. In general, the quality of the project will be evaluated by how closely the outcome matches the expectations set in the planning stages.

1. **Risk:**

With any project, there are limitations and risks that need to be addressed to ensure the project's ultimate success. The three primary constraints that project managers should be familiar with are time, scope, and cost.

**Estimated Capstone project Duration:** 4 months

Date :

Signature of the student :

Amitha.S

Anushree.T R

Faiza Khanum

Kousalya B S

Signature of the cohort owner

# Department of Technical Education Capstone project

**Format-2**

# Work Breakdown Structure

Capstone project Name: **Image Caption Generation using Deep Learning Technique**

Capstone project Members: **Group members**

Capstone project Objective(s):

# Work Breakdown Structure-Deliverables

* Literature survey – In this particular phase we will be surveying the previous research made over our project, as no one has made any sort of research over our project, so we have done one more kind of survey which is “observation survey” where we have also included the requirement gathering.
* Higher level design – In this particular phase we will be dealing with objective, and designing the Wireframes, Sitemaps, Architecture, Functionality, System designing.
* Database designing – In this stage we will be discussing all about the database, what are the information to be stored in the particular database, which databases should we use (MySQL) and so on.
* Front-end designing – In this part we will be designing the visual part of our website with the help of front-end technologies.
* Back-end designing – In this part we will be designing the logical part of the website with the help of back-end technologies.
* Document preparing - In this stage we will be preparing the document which includes all the detailed structural working of our college website.
* Testing – In this phase we move on with the process of different testing, which helps out project to be error and bug free project. In this we will be doing the Unit testing, Integration testing, Functional testing, Performance testing, Acceptance testing, System testing.
* Deployment – At the last for deploying our project to the end user we may be following the server deployment process.

Date :

Signature of the student :

Amitha.S

Anushree.T R

Faiza Khanum

Kousalya B S

Signature of the cohort owner

**Department of Technical Education**

**Capstone project**

**Format -3**

**Time-Schedule**

**Capstone project Name : Image Caption Generation using Deep Learning Technique**

**Members:**

**Identify the activities and tasks needed to produce each work package.**

* In the month of from January 1st to 10th we have done the **literature survey (observation survey)** regarding to our project
* And in the month of January, we have been doing with two of the tasks, so from January 11st to 31st we will be uplifting the **Designing of the project** with wireframes, sitemaps, Architecture designing, system designing etc.
* And in the same month of February, we will be **Designing the database** from February 1stto February 15th .
* And in the month of February, we will be doing the main part of our project, the life of the project which is **Front and Backend Designing**, from February 16th to February 29th, we will be doing our visual part, which is our front end designing. From March 1st to March 15th, we will be done with the logical part of the project which is our backend Designing.
* And the overall **Working Document** of our project will be starting in the month of March, from 16th to 30th of the month.
* And the last phase of our project where this project will be publicized to the users, after the testing is done, if not any bugs or errors, it would be passed out to the deployment process. So, our project **Testing and Deployment** would be in the month of April from 1st to 13thof the month.

Date : Signature of the student :

Amitha.S

Anushree.T R

Faiza Khanum

Kousalya B S

Signature of the cohort owner: