

# Ideation Phase

## Brainstorm & Idea Prioritization

**Date:** 29 October 2023

**Project Name** Project - Image Caption Generation

### **Project Description:**

In this project, we aim to create captions for images using deep learning techniques. This involves teaching a computer to understand the content of an image and describe it in human-readable language. To achieve this, we'll leverage Convolutional Neural Networks (CNN) and Long Short-Term Memory (LSTM) networks. While humans find image captioning easy, it's a challenging task for computers. The key is to combine the power of CNNs, which excel at image processing, with LSTMs, which are effective in understanding sequences and generating natural language. The project will require substantial datasets and computing power, considering the growing capabilities of deep learning techniques. Through Python, we'll implement and train models that can analyze images and generate descriptive captions. This fusion of CNN and RNN (LSTM) will enable the computer to comprehend visual content and express it in a language that humans can understand.

**Brainstorm & idea prioritization**

**1. Brainstorm your list of ideas**

- Brainstorming is a creative process that involves generating a large number of ideas, often in a group setting.
- It is a key component of the innovation process.
- It can be used to generate ideas for new products, services, or processes.
- It can also be used to generate ideas for solving problems or improving existing products or services.

**2. Define your problem statement**

- A problem statement is a clear, concise statement of the problem you are trying to solve.
- It is the first step in the innovation process.
- It helps you to focus your efforts on solving the right problem.
- It also helps you to communicate the problem to others.

**3. Build a team**

- A team is a group of people who work together to achieve a common goal.
- It is essential for the success of any project.
- It allows you to leverage the strengths of different people.
- It also allows you to share the workload.

**4. Build a case**

- A case is a document that explains the benefits of a particular idea or solution.
- It is used to convince others that your idea is worth pursuing.
- It typically includes information about the problem, the proposed solution, and the expected benefits.

**5. Prioritize**

- Prioritization is the process of ranking ideas based on their importance and feasibility.
- It helps you to focus your resources on the most promising ideas.
- It is a key part of the innovation process.

**Prioritization matrix**

The matrix shows the relationship between Importance (Y-axis) and Feasibility (X-axis). The matrix is divided into four quadrants:

- High Importance, High Feasibility:** This quadrant contains the most valuable ideas. These ideas are both important and easy to implement.
- High Importance, Low Feasibility:** This quadrant contains ideas that are important but difficult to implement. These ideas may require more research or resources.
- Low Importance, High Feasibility:** This quadrant contains ideas that are easy to implement but not very important. These ideas may be good for quick wins.
- Low Importance, Low Feasibility:** This quadrant contains ideas that are neither important nor easy to implement. These ideas should be rejected.