# Ideation Phase

## Define the Problem Statements

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| Date | 29 April 2023 |
| Team ID | NM2023TMID16615 |
| Project Name | Automated Weather Classification using Transfer Learning – Artificial Intelligence |
| Maximum Marks | 2 Marks |

**Automated Weather Classification using Transfer Learning:**

Based on the Literature Survey, the approach to building an Automated Weather Classification system using Transfer Learning involves data collection and pre-processing, model selection, feature extraction, training and evaluation, deployment, and continuous improvement.

The System should be user-friendly, scalable, and maintainable, and updated regularly with the latest weather data and improved models to ensure accurate classifications.

**Customer Problem Statement:**

| PROBLEM STATEMENT | I AM | I AM TRYING TO | BUT | BECAUSE | WHICH ASK ME FEEL |
|---|---|---|---|---|---|
| **Problem Statement 1** | Automated weather prediction relies heavily on the quality and availability of data. | Increase the density of weather stations: The density of weather stations needs to be increased to ensure that weather data is available for a larger geographical area. | Problem arises in the data sharing and collaboration | Upgrading weather observation equipment's | Modern equipment can provide more precise measurements, which can improve the accuracy of weather predictions. |
| **Problem Statement 2** | The complexity of weather systems | To address these challenges, we are constantly working to refine the models used in weather prediction and improve the accuracy and reliability of weather forecasts. This includes developing new data collection methods, improving the quality and resolution of existing data sources, and exploring new techniques for modeling and simulating the Earth's atmosphere. | Another challenge is the sheer complexity of the weather system itself. The Earth's atmosphere is a highly dynamic and chaotic system that is influenced by a wide range of factors | These models require vast amounts of data to function properly, and even then, they are subject to errors and inaccuracies due to the inherent complexity and unpredictability of the weather. | To improve the data collection and improve the quality of the weather prediction method. |