**Ideation Phase**

**Define the Problem Statements**

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| Date | 31 JANUARY 2025 |
| Team ID | PNT2022TMIDxxxxxx |
| Project Name | Project - xxx |
| Maximum Marks | 2 Marks |

**Ideation Phase: Define the Problem Statements – Pattern Sense Project**

In the ideation phase of the Pattern Sense: Classifying Fabric Patterns using Deep Learning project, the team focuses on clearly identifying the core problems that the system aims to solve. This step ensures that the development efforts are aligned with real-world needs across different industries.

**Defined Problem Statements:**

1. **Manual Fabric Pattern Classification is Time-Consuming and Inconsistent**  
   Designers, textile workers, and retailers often spend significant time manually identifying and categorizing fabric patterns like stripes, floral, or geometric designs. This process is subjective and prone to human error, leading to inefficiencies and inconsistencies.
2. **Lack of Automated Tools for Pattern-Based Quality Control in Textiles**  
   Textile manufacturers struggle to detect small pattern irregularities or defects during quality checks. Existing methods rely heavily on visual inspection, which may miss subtle issues, affecting the final product quality.
3. **Difficulty in Quickly** Searching **and Selecting Suitable Patterns for Design Projects**  
   Interior designers and fashion professionals often browse large collections of fabrics without an efficient way to filter or search based on pattern types. This slows down decision-making and increases the time needed to complete design tasks.
4. **Limited Real-Time Solutions for On-the-Spot Pattern Identification**  
   There is a lack of portable or real-time tools (e.g., mobile-based recognition) that allow users to instantly identify or verify fabric patterns in physical spaces like showrooms or factories.
5. **No Centralized System for Standardizing Pattern Tags Across Industries**  
   Without a unified tagging system, fabric data remains unorganized and hard to retrieve. This affects inventory systems, digital catalogs, and interoperability between manufacturers and designers.