**Ideation Phase**

**Brainstorm & Idea Prioritization Template**

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| Date | 31 JANUARY 2025 |
| Team ID | PNT2022TMIDxxxxxx |
| Project Name | Project - xxx |
| Maximum Marks | 4 Marks |

**Brainstorm & Idea Prioritization Template:**

The Pattern Sense project can be enhanced and organized using a simple idea prioritization approach. Key features brainstormed include pattern type classification, defect detection, real-time camera-based recognition, color palette detection, and pattern search tools. Among these, the most impactful and feasible features are automatic pattern tagging, core pattern classification, and a pattern search engine—all highly useful across fashion, textiles, and interior design industries. These features save time, improve accuracy, and streamline workflows. Prioritizing these will help build a strong foundation for the system while enabling advanced capabilities like real-time use and quality control checks in later phases.

**Step-1: Team Gathering, Collaboration and Select the Problem Statement**

The first step in the Pattern Sense project is to gather a multidisciplinary team that includes experts in machine learning, computer vision, textile design, and user experience. Collaboration begins by aligning everyone on the project’s objective: to automate the classification of fabric patterns using deep learning. During initial meetings, the team brainstorms various challenges within industries like fashion, textiles, and interior design. After evaluating multiple ideas, the team collectively selects a clear and impactful problem statement: “Develop a deep learning-based system that can identify and classify different fabric patterns (e.g., stripes, polka dots, floral, geometric) for applications in design, quality control, and trend analysis.” This focused problem lays the foundation for planning the technical solution and real-world application.

**Step-2: Brainstorm, Idea Listing and Grouping**

In this phase, the team engages in an open brainstorming session to generate a wide range of ideas related to solving the selected problem—automated fabric pattern classification. Team members contribute ideas such as creating a core pattern classification model, building a real-time mobile recognition tool, integrating a pattern search engine, detecting fabric defects, and generating automatic pattern tags. Once ideas are listed, they are grouped into relevant categories like **Core Features** (e.g., pattern classification), **Enhancements** (e.g., color palette detection), **Industry Applications** (e.g., textile quality control), and **User Tools** (e.g., pattern-based recommendations). This grouping helps the team identify high-priority areas, focus their efforts, and structure the solution for different user needs across fashion, textiles, and interior design industries.

**Step 3: Idea Prioritization**

After organizing the ideas, the team evaluates each one based on two key criteria: **impact** (how valuable or useful the idea is to end users) and **feasibility** (how easily it can be implemented with available resources and technology). Ideas such as automatic pattern tagging, core pattern classification, and pattern search engine are rated high in both impact and feasibility, making them top priorities. Medium-priority ideas include defect detection and real-time camera-based recognition, which are impactful but may require more complex implementation. Lower-priority or long-term ideas like pattern trend analysis and voice-based search are noted for future development. This prioritization ensures that the team focuses first on building essential, high-value features that lay a strong foundation for the system while planning more advanced features for later stages.