

PATTERN SENSE: CLASSIFYING FABRIC PATTERNS USING DEEP LEARNING

Ideation Phase Define the Problem Statements

Date	27 June 2025
Team ID	LTVIP2025TMID59821
Project Name	Pattern Sense: Classifying Fabric Patterns using Deep Learning
Maximum Marks	2 Marks

Customer Problem Statement Template:

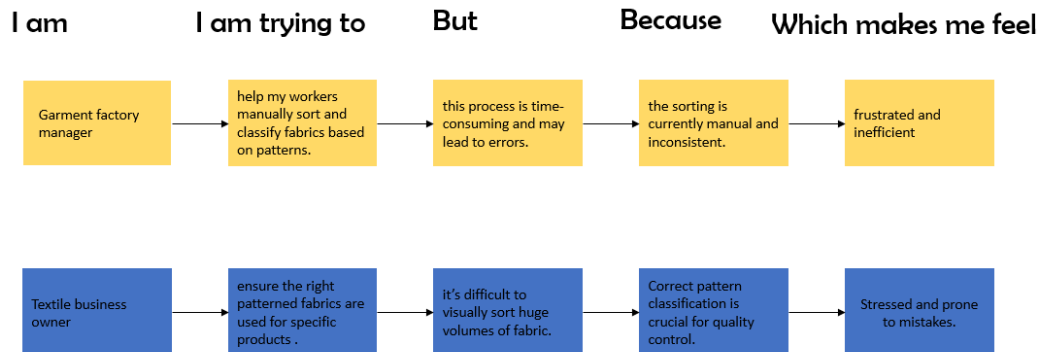
Manual fabric pattern classification in the textile and fashion industry is time-consuming, error-prone, and lacks consistency. Traditional inspection methods struggle to scale with increasing production demands and often misidentify subtle differences between patterns. The **Pattern Sense** project applies transfer learning to develop an automated, image-based classification system that accurately distinguishes between different fabric patterns like floral, stripes, polka dots, and more. This automation reduces human error, speeds up quality control, improves production efficiency, and ensures consistent labeling—ultimately benefiting manufacturers, retailers, and designers.

I am	Describe customer with 3-4 key characteristics - <i>who are they?</i>	Describe the customer and their attributes here
I'm trying to	List their outcome or "job" the care about - <i>what are they trying to achieve?</i>	List the thing they are trying to achieve here
but	Describe what problems or barriers stand in the way - <i>what bothers them most?</i>	Describe the problems or barriers that get in the way here
because	Enter the "root cause" of why the problem or barrier exists - <i>what needs to be solved?</i>	Describe the reason the problems or barriers exist
which makes me feel	Describe the emotions from the customer's point of view - <i>how does it impact them emotionally?</i>	Describe the emotions the result from experiencing the problems or barriers

Reference: <https://miro.com/templates/customer-problem-statement/>

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Customer Problem Statement Template



Problem Statement (PS)	I am (Customer)	I'm trying to	But	Because	Which makes me feel
PS-1	Garment factory manager	Helps my sorters sort patterns.	This process is time-consuming and may lead to errors.	Sorting is currently manual.	like frustrated
PS-2	Textile business owner	ensure the right patterned fabrics are used for specific products and batches	It is difficult to visually sort huge volumes of fabric.	Correct pattern classification for quality control.	like frustrated to sort and prone to mistakes.