

Project Design Phase
Problem – Solution Fit Template

Date	15 February 2025
Team ID	LTVIP2025TMID32512
Project Name	Classifying fabric patterns using deep learning
Maximum Marks	2 Marks

Problem – Solution Fit Template:

In industries like fashion, textiles, and interior design, professionals often face the tedious challenge of manually identifying and classifying fabric patterns—a process that's not only time-consuming but also prone to inconsistency. *Pattern Sense* addresses this issue by using deep learning to automate pattern classification, accurately identifying styles like stripes, florals, or polka dots while detecting any irregularities or defects. This enhances efficiency, reduces human error, and streamlines workflow across design and production processes, making it a smart solution tailored for modern creative industries.

Purpose:

- **Automate the identification and classification** of fabric patterns using advanced deep learning.
- **Reduce time and effort** spent on manual pattern categorization across industries.
- **Enhance accuracy and consistency** in fabric analysis, minimizing human error.
- **Support design professionals** in fashion and interior design by simplifying pattern selection.
- **Improve quality control** in textile manufacturing by detecting pattern irregularities and defects.
- **Increase productivity and streamline workflows** in creative and manufacturing environments.
- **Adapt to a wide variety of pattern types** including stripes, florals, geometric, and polka dots.

Template:

Define CS, fit into CC	1. CUSTOMER SEGMENT(S) CS Who is your customer? I.e. working parents of 0-5 y.o. kids	6. CUSTOMER CONSTRAINTS CC What constraints prevent your customers from taking action or limit their choices of solutions? I.e. spending power, budget, no cash, network connection, available devices.	5. AVAILABLE SOLUTIONS AS Which solutions are available to the customers when they face the problem or need to get the job done? What have they tried in the past? What pros & cons do these solutions have? I.e. pen and paper is an alternative to digital notetaking	Explore AS, differentiate
	2. JOBS-TO-BE-DONE / PROBLEMS J&P Which jobs-to-be-done (or problems) do you address for your customers? There could be more than one, explore different sides.	9. PROBLEM ROOT CAUSE RC What is the real reason that this problem exists? What is the back story behind the need to do this job? I.e. customers have to do it because of the change in regulations.	7. BEHAVIOUR BE What does your customer do to address the problem and get the job done? I.e. directly related: find the right solar panel installer, calculate usage and benefits; indirectly associated: customers spend free time on volunteering work (I.e. Greenpeace)	
Identify strong TR & EM	3. TRIGGERS TR What triggers customers to act? I.e. seeing their neighbour installing solar panels, reading about a more efficient solution in the news.	10. YOUR SOLUTION SL If you are working on an existing business, write down your current solution first, fill in the canvas, and check how much it fits reality. If you are working on a new business proposition, then keep it blank until you fill in the canvas and come up with a solution that fits within customer limitations, solves a problem and matches customer behaviour.	8. CHANNELS of BEHAVIOUR CH 8.1 ONLINE What kind of actions do customers take online? Extract online channels from #7	Extract online & offline CH of BE
	4. EMOTIONS: BEFORE / AFTER EM How do customers feel when they face a problem or a job and afterwards? I.e. lost, insecure → confident, in control - use it in your communication strategy & design.		8.2 OFFLINE What kind of actions do customers take offline? Extract offline channels from #7 and use them for customer development.	

References:

1. <https://www.ideahackers.network/problem-solution-fit-canvas/>
2. <https://medium.com/@epicantus/problem-solution-fit-canvas-aa3dd59cb4fe>