ProjectDesignPhase-II

SolutionRequirements(Functional&Non-functional)

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| Date | 27June2025 |
| TeamID | LTVIP2025TMID33776 |
| ProjectName | Pattern sense:ClassifyingFabricPatternsusingDeepLearning |
| MaximumMarks | 4Marks |

# FunctionalRequirements:

Followingarethefunctionalrequirementsoftheproposedsolution.

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| **FRNo.** | **FunctionalRequirement(Epic)** | **SubRequirement(Story/Sub-Task)** |
| FR-1 | FabricImageUpload | Uploadimagethroughfilebrowser Drag-and-drop upload |
| FR-2 | ImagePreprocessing | Resize image Normalizeimage Remove noise |
| FR-3 | PatternClassification | PredictfabricclassusingCNN  Returnlabel(e.g.,floral,plain) |
| FR-4 | ResultDisplay | Show predicted pattern on UI Showconfidencescore(e.g.,92%) |
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# Non-functionalRequirements:

Followingarethenon-functionalrequirementsoftheproposedsolution.

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| **FRNo.** | **Non-FunctionalRequirement** | **Description** |
| NFR-1 | **Usability** | Easy-to-useinterfaceforuploadingandviewing results |
| NFR-2 | **Security** | User-uploadeddataisnotstoredpermanently;  secureuploadpipeline |
| NFR-3 | **Reliability** | Themodelshouldproduceconsistentresultsacross similar images |
| NFR-4 | **Performance** | Thesystemshouldreturnpredictionswithin5  seconds |
| NFR-5 | **Availability** | Theserviceshouldbeavailable99%ofthetimefor classification |
| NFR-6 | **Scalability** | Thesystemshouldhandleincreasedimageuploads without performance drop |