- **Problem Id – 04**

- **Problem Statement Title: Personalized AI-Driven Learning System**

- **Theme/Domain – Smart Education**

- **Team Name – Team Aayan**

- **Team Leader –** Aashish Vishwas Tirmale, Yashodip Lotan more, Nayan Sambhaji Patil

- **College Name –** R.C.Patel institute of technology,Shirpur

✓ **Problem Definition:** Students often struggle to understand textbook theories and teachers face challenges relating lessons to students effectively.

✓ **Relevance:**

•Education is the foundation of progress.

•A large section of learners, including disabled students, are excluded from quality and engaging education.

✓ **Real-World Impact:**

•Enhances understanding and retention.

•Makes learning accessible for disabled and differently-abled individuals.

•Bridges the gap between educators and learners.

✓ **Overview:**

•An AI-based model that simplifies lessons by generating animated videos tailored to the student's language, hobbies, and interests.

✓ **Key Features:**

•Inputs: Lesson PDFs, notes, or other materials.

•Personalized storytelling based on user preferences.

•Animated videos with relatable real-world examples.

•Accessibility through audio-rich features.

✓ **How It Addresses the Problem:**

•Engages students with interactive, relatable stories.

•Provides teachers with tools for better lesson planning.

•Supports disabled learners with rich audio-visual aids.

- ✓ **Technology Stack:**
- Languages: Python, JavaScript
- Frameworks: TensorFlow, Flask/Django, ReactJS
- Tools: Hugging Face Transformers, Tesseract OCR, DALL-E API

- ✓ **System Architecture:**
- Input Processing: OCR for text extraction.
- NLP Pipeline: Summarization and context understanding.
- Story & Animation: GPT-based storytelling and video creation APIs.

- ✓ **Key Innovations:**
- Personalized learning through user-specific data.
- Real-world contextualization of lessons.
- Simplified outputs with minimal user input.

✓ **Potential User Base:**

- Students of all ages, particularly those struggling with traditional learning methods.
- Teachers looking to innovate lesson delivery.
- Disabled learners requiring accessible education.

✓ **Impact:**

- Social: Inclusive education for all.
- Economic: Cost-effective and scalable learning solutions.
- Environmental: Digital-first approach reduces paper usage.

✓ **Scalability:**

- Expandable across different education boards and languages.
- Global adoption with localized learning modules.

- **Planned Improvements:**
- Multilingual support for global reach.
- Advanced animations and gamification.
- Improved user data security.

- **Additional Features:**
- Real-time feedback for teachers and students.
- Community-driven content improvement.

- **Long-term Vision:**
- Establish a universally accepted personalized learning platform.
- Democratize access to quality education.

- **Why Our Solution Stands Out:**
- Combines AI, storytelling, and animation for unmatched engagement.
- Addresses real-world gaps in education with practical, scalable solutions.