LeARn- An augmented reality app to provide students and learners an interactive experience to enhance their learning experience

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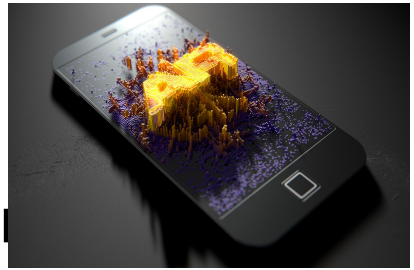
Theme:*Smart Education*

Introduction :



- Augmented Reality is basically the superimposition of 3D graphics on a real world environment to provide a augmented experience.
- It's one of the technologies that is on rise and has a lot of potential uses. One place where we can incorporate **Augmented Reality** is in the **EDUCATIONAL** sector.
- It's a well documented and researched fact that visualization and imagination contributes to a much faster and enhanced learning experience
- So exposing students to the this AR technology for educational purposes is going to enhance their learning experience by magnitudes

Current Problems :

- Visuals Less learning which leads to a Boring effect in most cases.
- Most Students find it harder to understand some concepts when there is a lack of three dimensional imagery
- Too much theoretical curriculum
- Uninteractive learning
- Untapped creative potential

— Idea Approach :

- We plan to use MARKER BASED AR in order to plant 3D models above them and use them in an efficient and useful manner to provide an AR experience.
- Example: A Biology text book will have models of HEART,BRAIN etc hovering above it to provide a 3D experience

- **Existing Diagrams of BOOKS** will be used to make markers and models will be planted on them.
- **POSTERS** will be also be used to make them INTERACTIVE using multiple marker interaction

Posters or Write-ups can turn to augmented reality images

Features :

- 3D models hovering above the already existing Diagrams in the books.
    - This feature is extremely useful for the subject of **BIOLOGY and related**
    - For example: The topic of HUMAN ANATOMY is one which would require a lot of visualization to properly understand so a biology student studying the concept of **HEART with a floating detailed labeled model of HEART** in front of him would learn much better than a student who would just read.
- VIRTUAL BUTTONS
    - **As talked about before, Interaction enhances learning experience.**
    - **A virtual button would allow the user to change between different models and videos without an actual physical button(a simple touch on the marker would work)**

- **Videos:**
  - One of the most attractive features is the presence of hovering 3D models but something even more attractive is the presence of hovering VIDEO in the 3D environment.
  - This will allow certain physical objects to have their Videos of their own and user can interact with them by virtual buttons

- **Mixed Reality view**
  - As projected by research,the mixed Reality headsets will be commercialized in the upcoming 2-3 years and some projects have already started their production.
  - Allowing student to view the whole Augmented Reality experience in a Virtual Reality Headset will give rise to the Mixed Reality experiences

Plan of Action :

ACTION	RESPONSIBLE	DEADLINE	STATUS
SMART CHART	ASHIT MEHTA	4TH APRIL	COMPLETE
AR BOOK	VAIBHAV SURI	4TH APRIL	COMPLETE
INTEGRATED APP	ASHIT MEHTA	4TH APRIL	IN PROGRESS