TEAM INVICTUS

SIH1664

To Develop a Software Solutions to Enhance Educational Infrastructure and Connectivity in Rural Areas

Theme - Miscellaneous

ORGANIZATION - MINISTRY OF EDUCATION

PROBLEM STATEMENT BREAKDOWN

a) Virtual Classroom Platforms

b) Educational Resource Management Systems

c) Internet Connectivity Optimization Tools

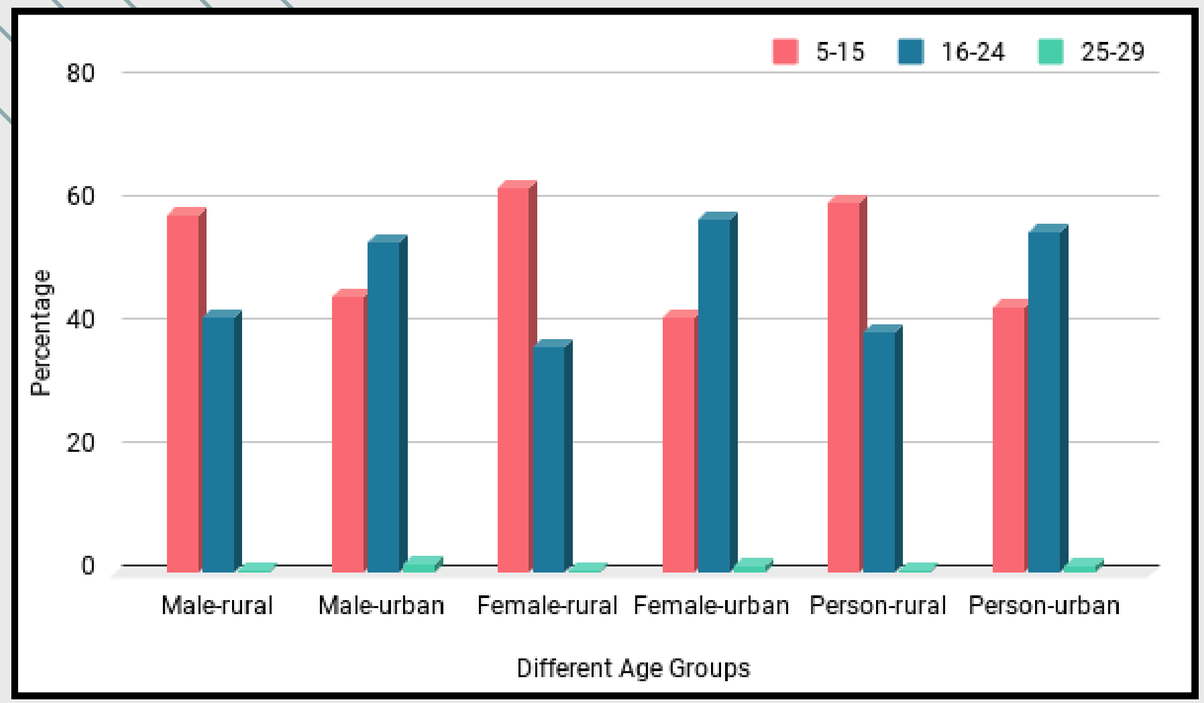
d) E-Learning Content Creation Platforms

e) Interactive Mobile Learning

f) Data Analytics for Infrastructure Planning

CURRENT SITUATION

Dropout Rate



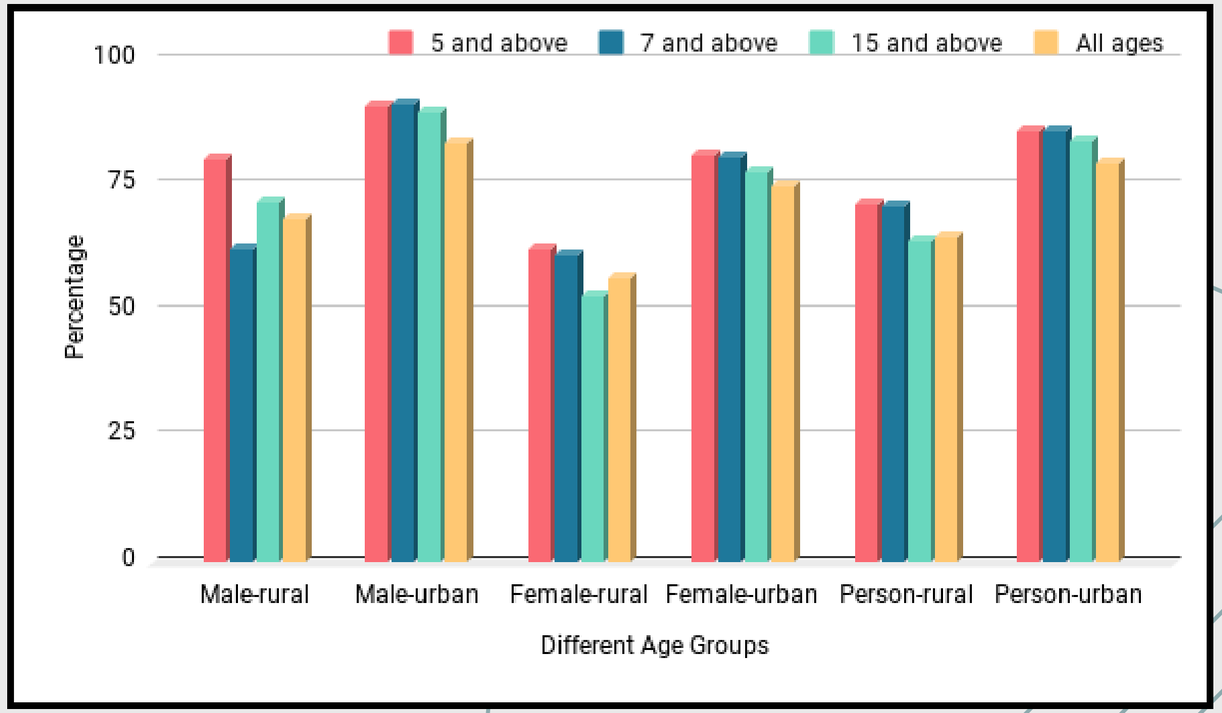
Among the parents of 156 students who dropped out of school :

36.8 % mentioned that their **daughters**' dropout was due to the need to contribute to the family's earnings.
71.8% mentioned that their **sons**' dropout was duo to lack of interest in studies.

Results from Census states that :

For Dropout rate of age **range 5-15** there is difference of **13.1%** between **Rural and Urban** as more students tend to stop their education partway in rural areas due to financial status or lack of interest and this is reflected in the literacy rate.

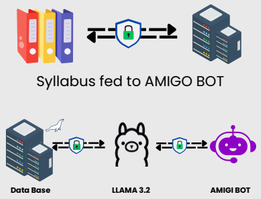
Literacy Rate



WORKFLOW

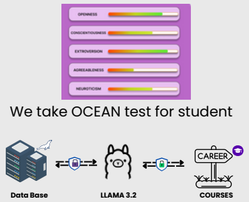
AI Chatbots

Study Buddy Chatbot



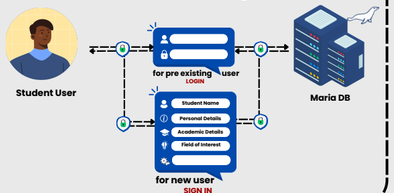
Student can study at their own pace with the chatbot

Ai Career Counselor



Ocean Test Scores, Student Interest are fed to the ML model

Student Login



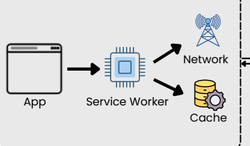
The data acquired from career guidance will be fed back into the ML model without any personal details for continuous improvement

Teacher/Admin Login

Faculty
Class In charge or a Subject Faculty

Progressive Web App

Progressive Web App



Content Caching

The Contents get cached to the Local Device of the User

Syncing Offline

The Cached Content can be accessed Offline via the pwa App

User Management

The Faculties can Monitor the Student's and can Manage and Create Batches

FRAPPE LMS

Course Management

Teachers can Create Courses and can Add can Attach the Notes and Materials of the Same

MEET/QUIZ

Student's can join live classes attend the conceptual quizzes

OFFLINE ACCESS

OFFLINE

Caching the content and materials given by the faculty and provide it in offline

Progress Tracking

Tracking Student's Progress and Analysis on Daily,Weekly Basis for Consistent Learning and Submissions

Instead of Relaying on API's like (GPT) We train our LLM Modal to give Personalised Guidance

DATA ANALYTICS DASHBOARD

Student Data Analytics

Real-Time Metrics

Analyzing data, to improve performance, efficiency

Student Engagement Tracking

To monitor and analyse realtime Student Progress

Working Live Classes

A versatile open-source platform Jitsi, offers comparable features to Zoom and G-meet ,with the notable features of low reliability and .

Working of Peer-Tube

Faculty give their lectures to PeerTube, a decentralized platform. These lectures are then made accessible to nearby peers who have reliable network connections.

Working of EtherPad

Etherpad is a highly customizable open source online editor providing collaborative editing in really real-time.

Working of P2P Hub

P2P uses student data to recommend personalized community groups based on career interests. Communities offer tasks, networking sessions, and collaborative learning opportunities.

TIER I – SOLUTION

JISTE MEET : Live Interactive Classes

It is a open source live streaming platform with whiteboard , recording and adaptability features

PEERTUBE : Download and Share

It is a open source video sharing platform that uses peer-to-peer network to share files effectively.

Offline Access

Scheduling Meets, reviewing notes, videos and mock quizzes are all available offline

Data Analytics

Student's data is used to analyze student's performance so that teachers can have an opinion of students

Data Sovereignty

By using open source platform data leakage is prevented.

Content Creation With Localization

Teachers can create assignments and send quizzes/tests during live classes which is multilingual.

Academic Chatbot

Chatbot helps you with information based on the students portions and here we have used llama 3.1

EXPERIMENTAL FEATURES

Custom OS

For Extremely Impoverished Students who are not having mobile phones or even network connection , we partner up with Government Orgs to provide students with laptop having our custom built OS

P2P Learning

Engaging Community of like-minded Students

Share and transfer knowledge effortlessly

Grow together through collaborative learning

PROPOSITION

Our target audience is categorized into two tiers based on the availability of key parameters.

TIER-I

- Tier I includes students who have mobile phones and reliable network connectivity.
- They have access to all the necessary facilities, but face challenges in utilizing them effectively.

TIER-II

- Tier II includes student’s whose does not have an proper internet or even mobile phone.
- These student’s have their home located in an remote areas where network is not available.

TIER II – SOLUTION

Here we may consider two scheme provided by Government of India

Rashtriya Madhyamik Shiksha Abhiyan (RMSA)

RMSA is a flagship scheme of Government of India, to enhance access to secondary education and improve its quality.

Sarva Shiksha Abhiyan (SSA)

The program focuses on creating schools in underserved areas and improving existing infrastructure with additional classrooms, toilets, water, and grants.

Eklavya Model Residential Schools (EMRS)

EMRS provides quality education to ST children in remote areas, with 480 students per school from Class VI to XII, focusing on academics and overall growth, funded under Article 275 (1).

Schemes that offered free Laptops:

Sikkim govt. distributed 18,500 Lenovo laptops to bridge the digital divide among students in rural govt. schools and colleges.

Other NGOs and MNCs:

Tata Consultancy Service (TCS):

Ignite My Future in School (IMFIS)

Google:

Helping in equip the next generation with future skills
invest in projects and organizations that expand access to learning

BUSINESS CANVAS

Key Partners

- Educational Institutions
- Government
- Non-Profit Organization
- MNCs(Google etc.)
- Charity Organization

Key Activities

- Live Classes
- Content Creation
- Data-Analytics Feedback
- Training Teachers

Key Resources

- Developers, educators
- Scalable hosting and storage.
- Syllabus Textbooks and Teachers' Notes

Value Propositions

- Live Classes
- Downloading previous classes
- Downloading eBooks and teacher notes
- Offline access to already viewed content, scheduling live class etc.

Customer Relationship

- Students(Individual)
- Teacher
- Institutions

Channels

- Online Platform
- Directly selling to Schools
- Partners act as intermediatory(for OS)

Customer Segments

Initial Target Audience:

- Tier I Rural Schools
- Urban Schools

Following the initial launch:

- Individual Students

Non-Profit Customers:

- Tier II Rural Schools and Students

Cost Structure

- Development Cost
- Server Cost

} 2 crores

Revenue Stream

- Selling to schools in Urban Areas using a Subscription plan - 1000rs per head
- Subscription from Individual students - 1500rs per head

IMPACTS

Improved Access to Education
Bridges the gap for rural students by offering solutions.

Data privacy: Offers data privacy and prevents leakage of data by using open source platforms.

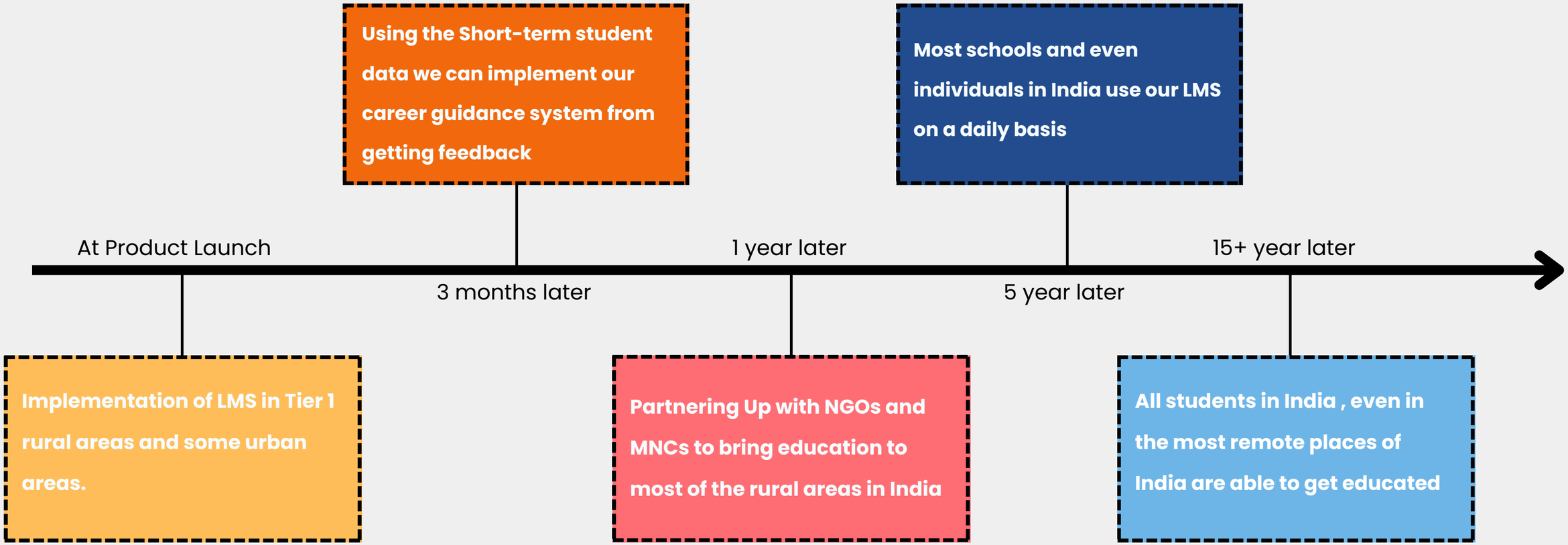
Improved Connectivity: Partners with government programs and NGOs to extend education to remote areas.

Education Accessibility : Enable students to learn anytime through offline access

Digital literacy : Improves the familiarity with technology among students and teachers

Skill Development : Prepare Students for futuristics jobs with skills based courses of their interest.

PRODUCT PATHWAY



All Indian students should be able to get educated :

Even if the students are in the most remote part of India that doesn't mean that they cannot get education. Our vision is to make sure all students in India get the education they deserve. "No one should be left behind!!"

Thank You

Abraham Samuel E

Adhithiya Suresh Raja

Afdhal Mohamed A

Rithesh

Rohit

Akshaya S