illumination

Sprint 0

By Team 1 Tech Titans

Agenda

Team Members	Names of team members involved in the project.
Problem Statement	The challenge or issue the project addresses.
Project Description	Brief overview of the project's purpose and functionality.
Personas	User profiles representing target audience.
Technologies	Tools, frameworks, and platforms used in the project.
Algorithms	AI/ML models implemented.
Project Schedule	Timelines of the project.
Team Working Agreement	Rules and expectations for team collaboration.
Retrospective & Wiki Page Link	Reflections on project progress.

Team Members

Anuhya Marapalli

Scrum Master / Developer

Snehalatha Boothpur

Designer / Developer

Rithin Guptha Bajuri

Developer

Team Members

Harshitha Rangaraju

Developer

Srinivas Reddy Bapathu

Developer

Problem Statement

So there is always an issue in learning because the present education system is a fit system where all students with different ways of learning or understanding, were taught in the same manner which causes some to understand it very well whereas some are unable to understand it well. This leads to a loss of interest and focus for those who genuinely want to learn.

Project Description

Project Name:	Illumination
Team:	Tech Titans
Project Description:	Illumination is an AI-driven mobile learning application designed to deliver personalized learning through real-time adjustment of article contents based on students' performances and preference. For students who wants more structured learning experience the Illumination is a app with it's advanced ML techniques, that adjusts the difficulty and provides personalized content recommendations, unlike traditional learning apps or already pre defined content application our application uses AI to continuously monitor student learning and it dynamically updates the learning path.
Benefit Outcomes:	• This will improve the understanding of the student in weak areas. • This continuous tracking, will also get personalized feedback, which will let students know where they lag. • This will improve students retention through spaced repetition. • This is also way more efficient in learning new concepts.
Github Link:	https://github.com/htmw/2024F-Tech-Titans/wiki

Ankit, 17 year old

Ankit is a high schooler who is preparing for IIT JEE exams where is he good at Mathematics and Chemistry but he struggles in Physics, even though he attends extra classes, but he never excels it. So, he feels like he personalized study material to improve his weak areas.

Goals:

- Have good grasp on difficult physics topics.
- Have access to personalized materials on complex topics or topics where he is weak at.
- Able to balance school, extra classes and self study.

Challenges

- There is a lot of content in online or in books but unable to find proper content for his weakness topics.
- Searching for proper material is time taking.
- Unable to identify the weak topics.

Rajat, 28 year old

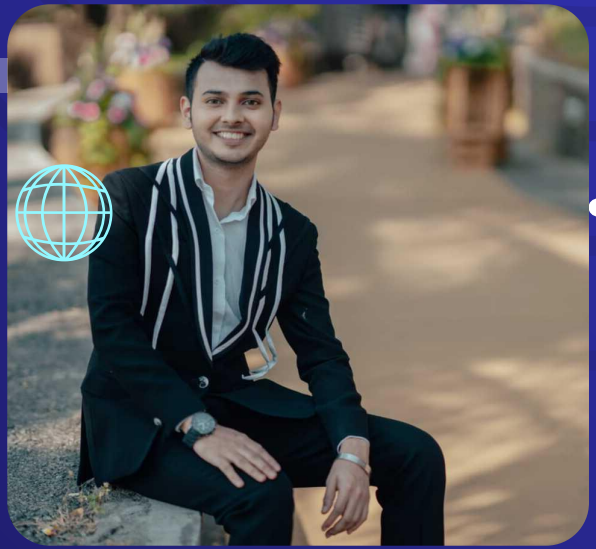
Rajat is CA (Chartered Accountant) aspirant from Mumbai, but he is also working full time in financial firm, which causes him have less time to study. He finds financial reporting and taxation difficult and even struggling to focus because of tight schedule.

Goals:

- Improve the understanding of the complex topics.
- Able to access the targetted material on the topics which he finds difficult.
- Able to balance both work and preparation.

Challenges:

- Its difficult to manage both work life and student life which leading him not to study well.
- Time consuming on finding the concepts he is weak at.
- Struggling to study all because of broad topics in CA.



Kavya, 21 year old

Kavya is engineering student, as she is near her job trails and she is interested in Machine Learning and GenAI, she want to study them and learn them, but she have no idea on machine learning. When she searching of google for roadmap, all those roadmap doesn't suit her well which causes her to distract.

Goals

- Master all Machine learning and deep learning concepts.
- Able to read fine quality materials which simplify the complex concepts into simple once.

Challenges

- There are alot of materials on it which causes to read alot of materials of same topics to understand them.
- Facing difficulties in retaining the concepts.
- Unable to keep up with the latest trends on ML.

Technologies

01.

Backend

fastAPI
Node JS
Mongodb
AWS
Pytorch

02.

Frontend

React Native

03.

Tools

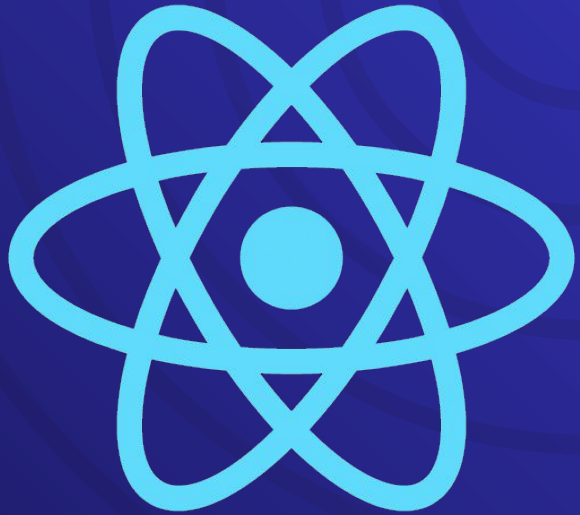
Github
Postman
Google Colab
VSCode

1. Backend

Here FastAPI is primarily used for machine learning backend tasks where as Node JS is primarily deals with Client Side code. MongoDB for Storing the data. AWS for hosting and even for storing the objective Data. Pytorch for Machine learning

2. Frontend

React Native is used for building cross platform mobile application.



3. Tools

Github is where code and even the documents are shared. Postman is for API Testing. Google Colab for training the Machine Learning Model. VSCode is used for writing the code

Algorithms

Reinforcement Learning

Reinforcement Learning (RL) is a machine learning paradigm where an agent learns by interacting with an environment and receiving rewards for actions. In adaptive learning, RL is used to dynamically adjust content difficulty based on student responses, maximizing engagement and learning efficiency over time.

Word2Vec

Word2Vec is a deep learning-based model that transforms words into continuous vector representations, capturing semantic relationships between words. In content-based filtering, it is used to convert textual content (article text) into vectors, allowing us to measure similarity between content items. Similar vectors imply similar content, enabling personalized recommendations.

Project schedule

3 times a week

Team Meeting will be held

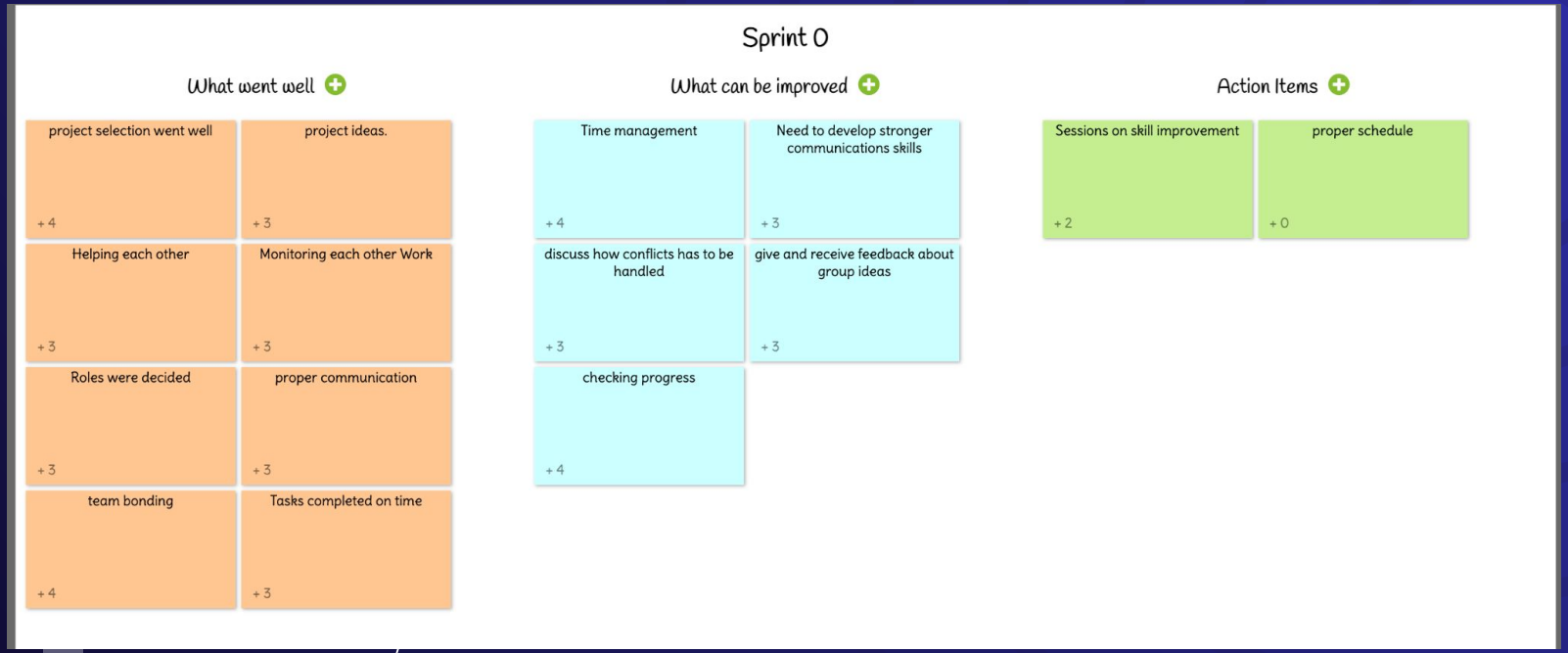
Team Agreement

Team Agreement

Team Tech Titans

- We, as members of the team, are committed to attending all scheduled meetings on time. When this is not possible, it should be communicated to the group in advance so that proper readjustment may occur.
- If a member is unable to attend a meeting, they will inform the team beforehand and stay updated on any decisions made during their absence. In situations where rescheduling isn't feasible, the absent member agrees to follow the majority decision.
- Every member is encouraged to seek help from the other members when they have any doubts or are facing issues, instead of waiting till the last minute.
- Team members can freely express their opinions and suggestions during meetings or discussions. In case, if they didn't give feedback, their decision is taken as Yes.
- Members are encouraged to be active in the discussions or meetings and even pay attention during key discussions. It is expected that everyone will be active and participate.
- Fair distribution of tasks in the group; each member will finish his/her part of the task by the agreed deadline, so that the work on the project proceeds consistently.
- It is expected that teammates respect the time and commitment of one another. Members should be punctual with responses in the group chat and adopt a professional attitude. Every member will try to put forth their best effort.

Retrospective



Wiki Link

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