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TECHNOVISION HACKATHON IDEA

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PROBLEM STATEMENT



EDUCATION



Look at creative methods of delivering remote learning to students of all ages and aiding teachers/schools in the process.



SOLUTION OVERVIEW



- Our mission is to give students of all ages especially college students **one stop solution** to their study needs.
- This mission **aims** to **simplify** the **learning** process of the students which will help them to focus on what's needed rather than wandering around the internet searching for resources.

- Our vision is enhancing how the students approach learning.
- We make it easier for them by introducing features such as: **Research Paper Simplification, Notes Reader, QnA for Doubt Clearance, Resource Recommendations, PPT Generation.**



TECHNICAL DETAILS

THE TECH STACK WE PLANNED TO USE IN THIS PROJECT IS:

PYTHON - ALMOST THE CODE IS WRITTEN USING IT

STREAMLIT - PYTHON LIBRARY FOR FRONTEND

WORQHAT - FOR AI MODELS AND API

HTML/CSS - MINIMAL USAGE

ORIGINAL VS. IMPLEMENTATION

1. RESOURCE RECOMMENDATION

ORIGINAL IDEA: WE WANTED TO MAKE A SYSTEM IN WHICH THE STUDENT WILL UPLOAD THEIR SYLLABUS INTO OUR WEBSITE. THE WEBSITE WILL GENERATE A LEARNING PATH THAT WILL ALSO RECOMMEND RESOURCES LIKE YOUTUBE VIDEOS OR WEBSITES WHERE THEY CAN LEARN THE CHAPTERS MENTIONED IN THE SYLLABUS.

IMPLEMENTATION: WE INTEGRATED THIS TO A CERTAIN EXTENT. WE WILL TAKE INPUT FROM THE USER AND USE SEARCH APIs TO GIVE RESOURCE RECOMMENDATIONS ON THE TAKEN INPUT.



ORIGINAL VS. IMPLEMENTATION

2. RESEARCH PAPER SIMPLIFIER

ORIGINAL IDEA: RESEARCH PAPERS ARE VERY IMPORTANT ESPECIALLY FOR COLLEGE STUDENTS TO GET OVERVIEWS ON HOW A PROJECT WAS CREATED AND ALSO LEARNING NEW THINGS ALONG WITH IT, BUT RESEARCH PAPERS ARE A BIT DIFFICULT TO UNDERSTAND BY AN AVERAGE STUDENT, SO WE WANTED TO CREATE A FEATURE IN WHICH WHEN THE PAPER IS UPLOADED, IT WILL GENERATE THE SUMMARY, AND THEN WE CAN ALSO ASK QUESTIONS BASED ON THAT TO CLEAR FURTHER DOUBTS.

IMPLEMENTATION: WE ACHIEVED THIS FEATURE IN ITS ENTIRETY, BUT WE DECIDED TO SEPARATE THE QNA PART AS TO MAKE IT ACCESIBLE NOT ONLY FOR THE RESEARCH PAPER BUT ALSO FOR OTHER PURPOSES.



ORIGINAL VS. IMPLEMENTATION

3. NOTES READER

ORIGINAL IDEA: IN THIS FEATURE THE USER WOULD BE ABLE TO UPLOAD THEIR CLASS NOTES. THE UPLOADED NOTES WOULD THEN BE PROCESSED AND FACT CHECKED WHICH WOULD REMOVE THE ERRORS IN THE NOTES. THE FEATURE WOULD ALSO GENERATE THE SUMMARY OF THE NOTES FOR QUICK REVISION.

IMPLEMENTATION: WE COMPLETED THIS FEATURE. THIS WAS ALSO GOING TO CONTAIN A QNA BUT AS MENTIONED EARLIER WE DECIDED TO KEEP IT SEPARATE.



ORIGINAL VS. IMPLEMENTATION

4. GRAMMAR CHECKER

ORIGINAL IDEA: THIS IS A VERY GENERAL IDEA. GRAMMAR CHECKER IS NEEDED EVERYDAY NOT ONLY FOR STUDENTS BUT ALSO FOR OTHER INDIVIDUALS. STUDENTS HAVE TO WRITE ESSAYS, EMAILS, ETC. THIS CAN HELP THEM FIX THE GRAMMAR OF THEIR TEXT AND ALSO LIGHTLY IMPROVE THEIR WRITING.

IMPLEMENTATION: WE COMPLETED THIS FEATURE ACCORDING TO THE ORIGINAL IDEA.



ORIGINAL VS. IMPLEMENTATION

5. PPT GENERATION

ORIGINAL IDEA: WE WANTED TO CREATE PPTS FOR THE STUDENTS AS THEY HAVE BECOME A CRUCIAL PART OF THEIR SCHOOL OR COLLEGE LIFE.

THERE ARE PPT GENERATORS OUT THERE BUT MANY OF THEM ARE PAID OR NOT THAT GREAT.

WE WANTED TO CREATE SUCH PPTS THAT ONCE CREATED THERE WOULD BE NO NEED FOR ANY OTHER EDITING, IT WOULD BE READY TO PRESENT. WE ALSO WANTED TO USE IMAGE GENERATION TO BEAUTIFY THE PPT.

IMPLEMENTATION: WE MODIFIED THIS IDEA A BIT. WE WILL ONLY BE GENERATING THE CONTENT OF THE PPT. IT WILL ENSURE THAT THE CONTENT IS SUFFICIENT FOR A PPT AND COVERS ALL OF THE TOPICS NEEDED.



EXPERIENCE

THIS WAS OUR FIRST 24-HOUR HACKATHON.

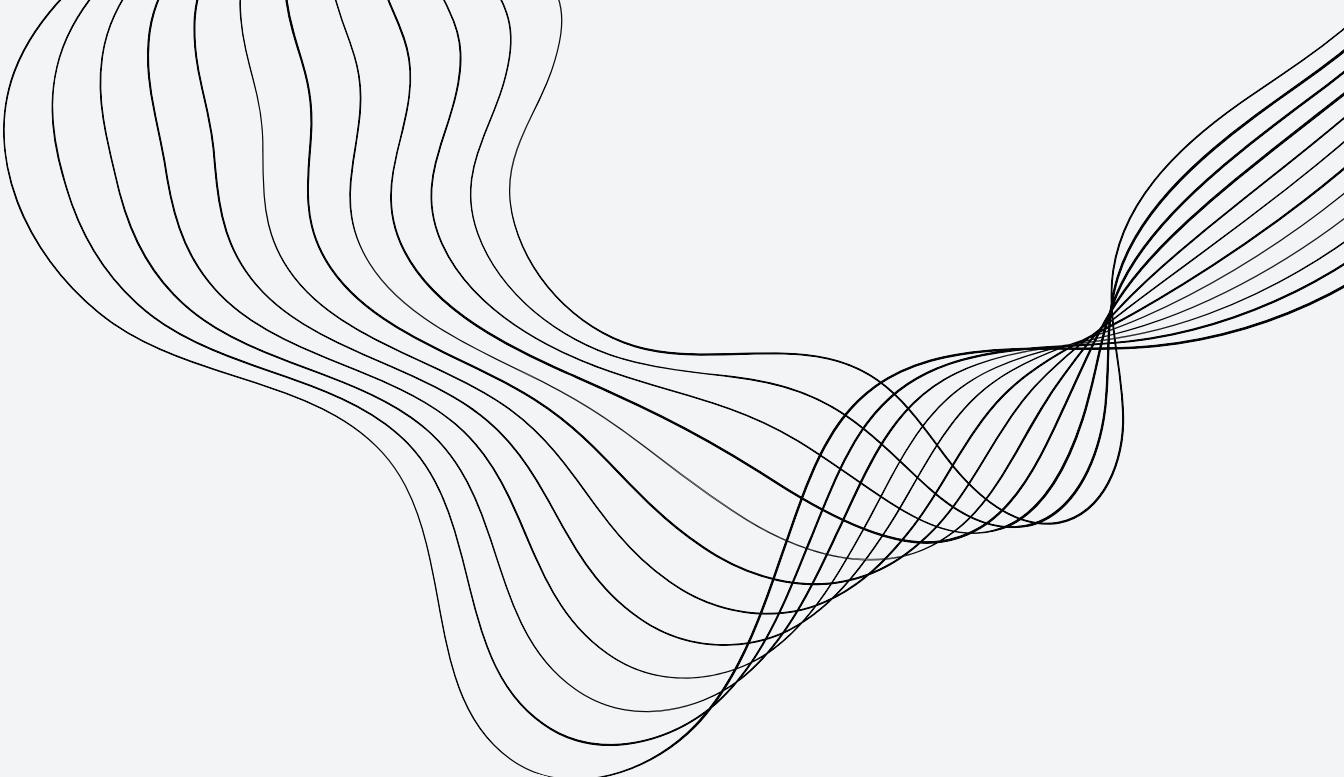
THIS HACKATHON TAUGHT US TIME MANAGEMENT
AND ALSO PROJECT MANAGEMENT.

IT GAVE US A PLATFORM TO COMPETE AND SHOW
OUR SKILLS AND ALSO ALONG THE WAY LEARN NEW
SKILLS THAT WE MIGHT NOT HAVE EVEN HEARD OF.

USING THE API MODELS BY WORQHAT INSPIRED US
AND MOTIVATED US TO EXPLORE THE FIELD OF AI IN
MORE DETAIL.

OVERALL, WE HAD A GREAT EXPERIENCE IN DURING
THIS HACKATHON.

ABOUT TEAM



Shubham Sarkar

Helped with the API.

Figured out how to operate
the AI models.

Head of feature creation.

Aditya Gajjar

Used previous knowledge about
LLMs to help the team integrate
the features into the website.

Helped with Frontend

Made the Idea Submission PPT.

Vijit Pandey

Learnt a lot of new things.

Helped a lot with the frontend
and learnt the tech stack quickly.

Collaborated with Shubham for
feature creation.

FUTURE PLANS

If we had more time/If we decide to work more on this in the future, we will add:

Full-Fledged Resource Recommendations: This can include customizable learning paths and better resources recommended by using the YouTube API in depth.

We would also like to add a bit of backend so that the students can store the history of their chats with the AI models provided and also their notes in a safe place for future reference.

We would also like to improve the Notes Reader Feature to give more detailed information and also create a question bank by reading the notes uploaded.

THANK YOU



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