

Vidyapak Documentation

What is Vidyapak?

Vidyapak helps teachers make classes fun and saves their time, we provide interactive tools for teachers to reduce their burden

Our primary focus is on the teachers who are in rural areas and are teaching in primary classes

you can see the demo here: <https://youtu.be/ktgQFyjtaag>

Tech Stack Used

Frontend

- Next JS
- Tailwind
- Shadcn UI

Backend

- Firebase (storage and authentication)

Some Packages Used

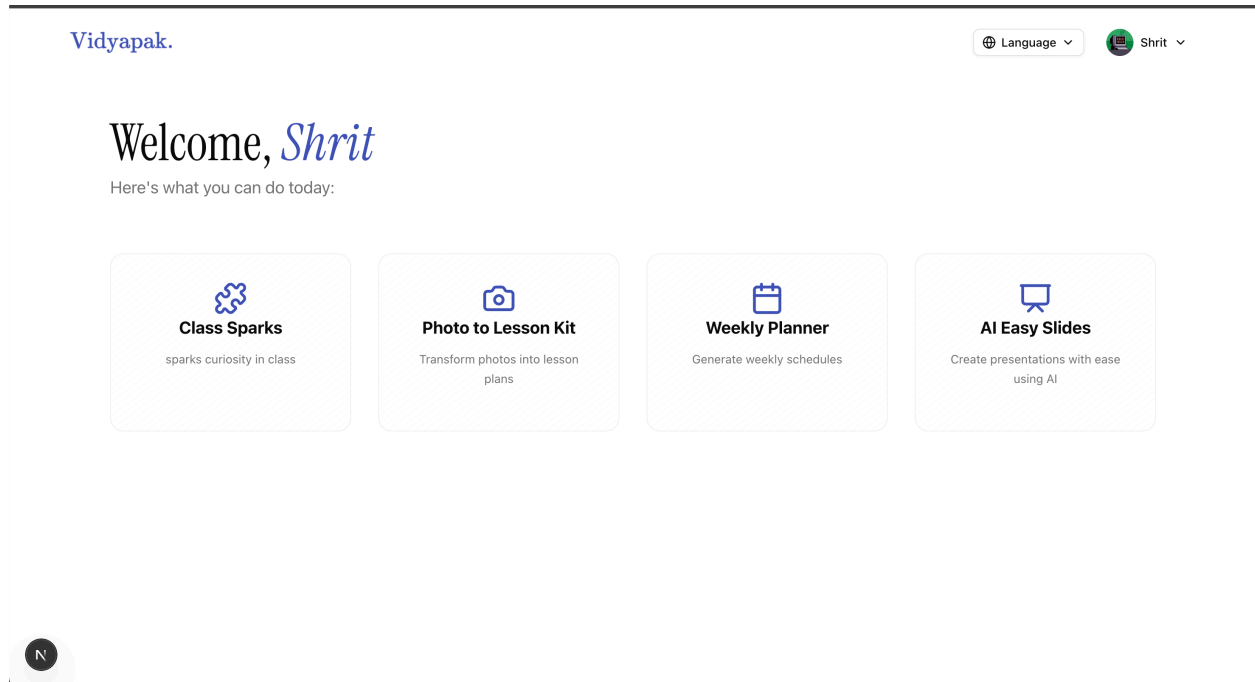
- `react-markdown` : For Chat Bot
- `pptxgenjs, jsPDF, html2canvas` : for making pdfs and ppts
- `openai, gemini` : for agentic AI we have used both openai and gemini

Features

For Making Teachers Life Easy, we have introduced 4 features

1. Class Spark

2. Photo To Lesson Kit
3. Weekly Planner
4. AI PPT maker



we will now go in detail on how we built each and every feature

Class Sparks

Imagine you are a history teacher preparing for tomorrow's class. With Class Spark, you can ask for ideas on how to make your lesson more engaging and fun.

Vidyapak.

Language

Shrit

Class Sparks
 Make Your Class More Classsy

09:28

I am history teacher and tomorrow i wanna teach kids what role gandhi played can you tell me nice way how to

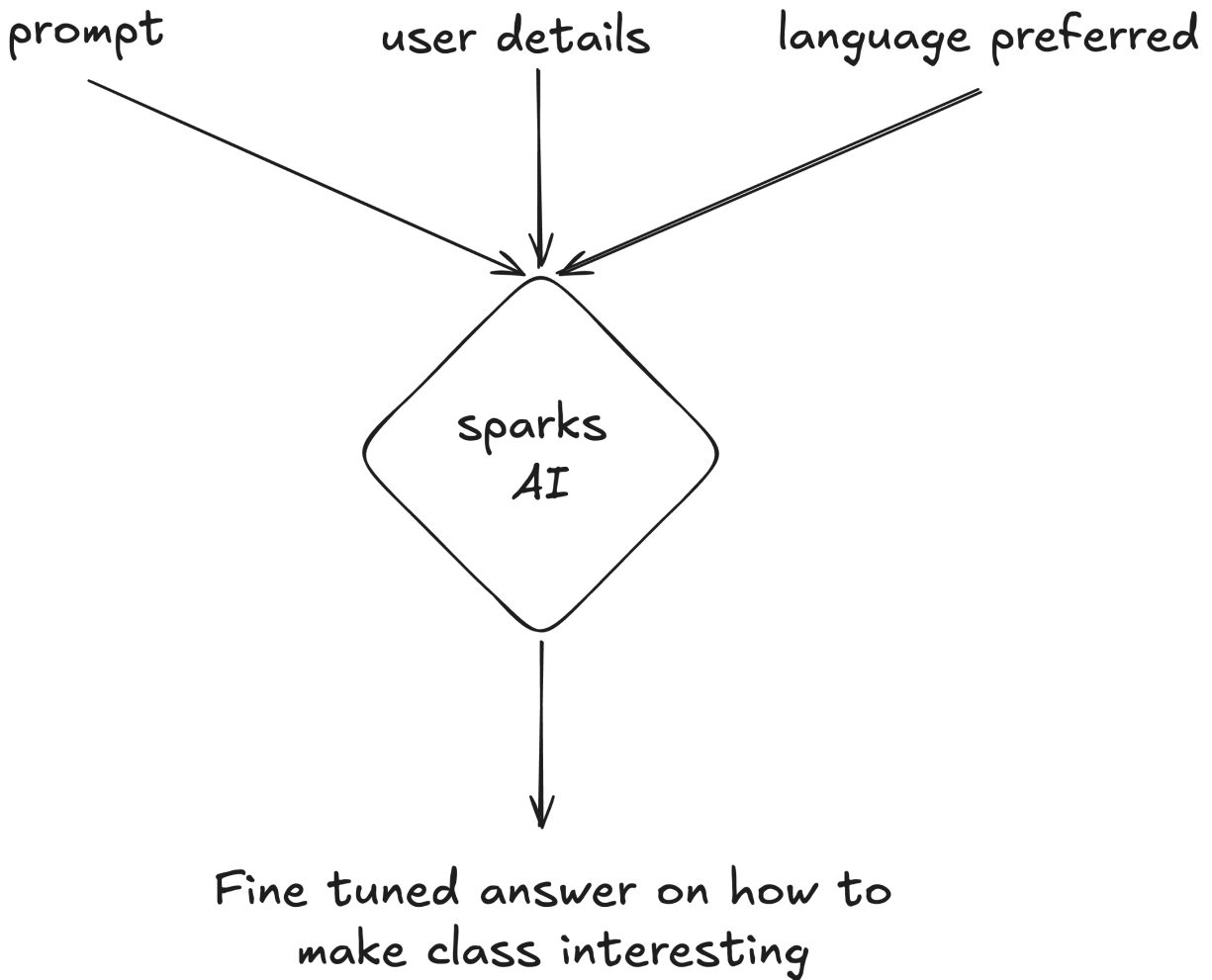
09:28

Hi Shrit! Teaching about Gandhi is fantastic! There are so many ways to make it engaging for your students. Let's brainstorm some ideas to spark their curiosity:

- Start with a Mystery:**
 - The "Unsolved Case" of British Rule:** Begin by presenting a simplified version of the challenges India faced under British rule. Pose it as a mystery: "India was facing huge problems... poverty, unfair laws, lack of freedom... How could a single man possibly make a difference?" This immediately hooks them into wanting to find out about Gandhi's role.
- Interactive Timeline Activity:**
 - Human Timeline:** Have students create a human timeline of Gandhi's life. Assign each student a significant event from his life (e.g., Salt March, Champaran Satyagraha, etc.). They can create a simple sign with the event and year, and then arrange themselves chronologically in the classroom to visualize his journey. This gets them moving and actively involved.
- "What Would You Do?" Scenarios:**
 - Ethical Dilemmas:** Present students with scenarios Gandhi faced – perhaps a simplified version of the injustices he witnessed. Ask: "If you were in Gandhi's place, what would you do? How would you peacefully protest against unfairness?" This encourages critical thinking and empathy.

Ask me anything about teaching, lesson plans, or classroom activities...

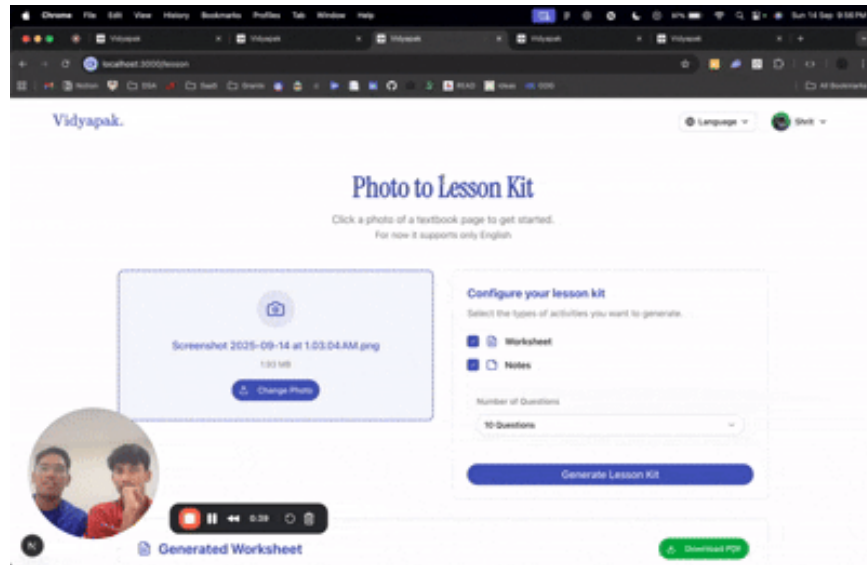
Implementation



Sparks AI is a gemini's `gemini-1.5-flash` model, we are streaming the response directly to the chatbot

Photo To Lesson Kit

Teachers often spend hours creating worksheets or notes. But what if, by simply uploading images of textbooks, they could generate both in just one click?



Implementation

Teacher upload document



Using Openai Vision models
we get info on what that
document is about



Using gpt4o model we
generate worksheet and
notes



using packages like
html2canvas and jsPDF we
make the worksheets
downloadable

Weekly Planner

every teacher has to spend time to think what they will teach every week what if using AI we can help them to have basic idea, which they can iterate on

Weekly Teaching Plan

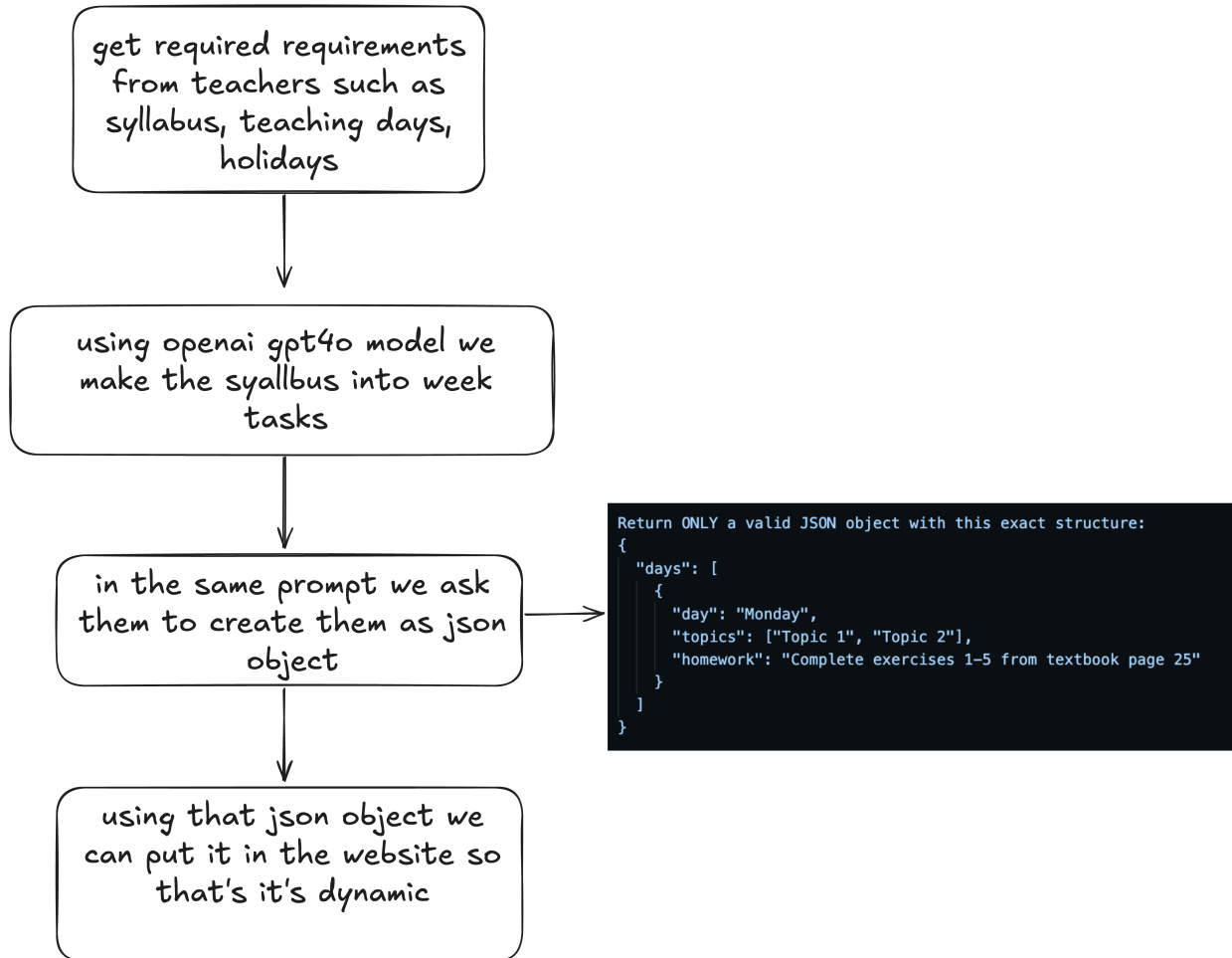
Your personalized weekly schedule

The form displays a weekly teaching plan with six days, each in a colored box. Each day includes a 'Topics to Teach' section (marked with a blue dot) and a 'Homework' section (marked with a green dot). The topics and homework are listed in white boxes within each day's section.

Day	Topics to Teach	Homework
Monday	Characteristics of living beings	Draw a picture of a living thing and write down three characteristics it has.
Wednesday	Differences between living and non-living things	List two examples of living things and two examples of non-living things in your home.
Thursday	Parts of a plant and their functions	Label the parts of a plant diagram and write one function for each part.
Friday	Photosynthesis in simple terms	In your own words, explain why plants need sunlight.
Saturday	Review of Living and Non-Living Things Review of Plant Life	Complete exercises 1-5 from textbook page 25.

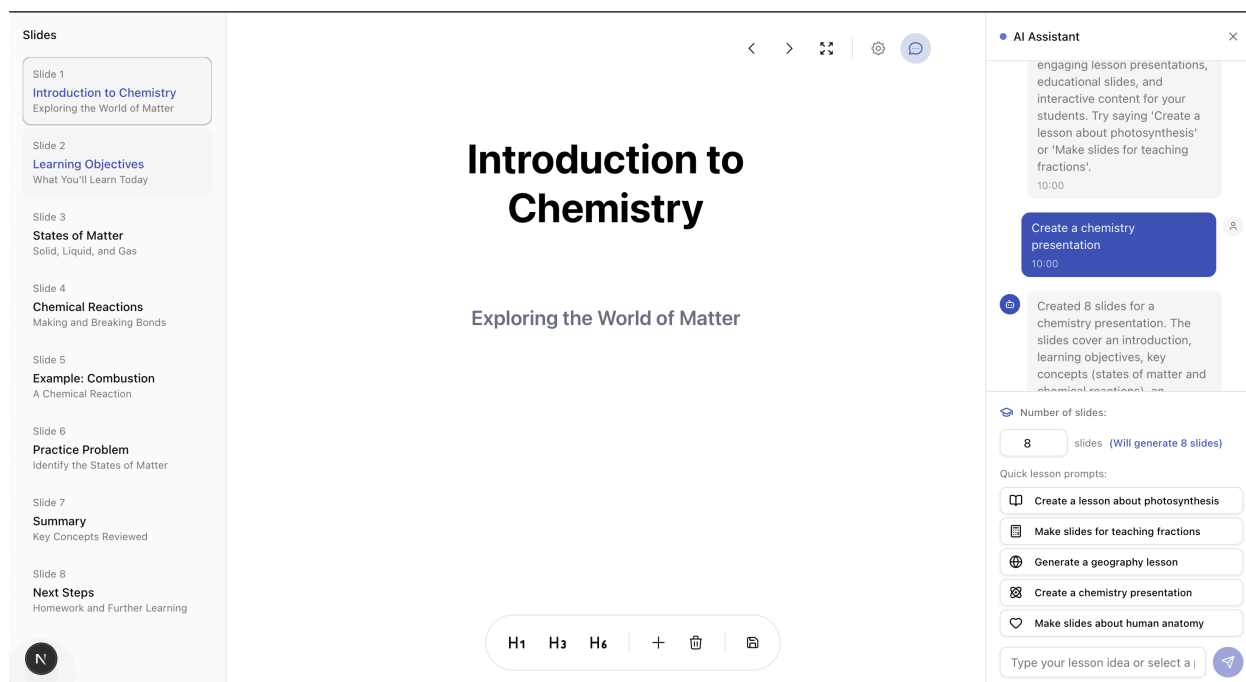
Legend:
● Topics to Teach ● Homework Assignment

Implementation



AI PPT maker

PPT's are must for a teacher, each lesson requires it's own ppt, current AI PPT generators aren't upto the mark, they're not still teacher-friendly, hence that's what we tried

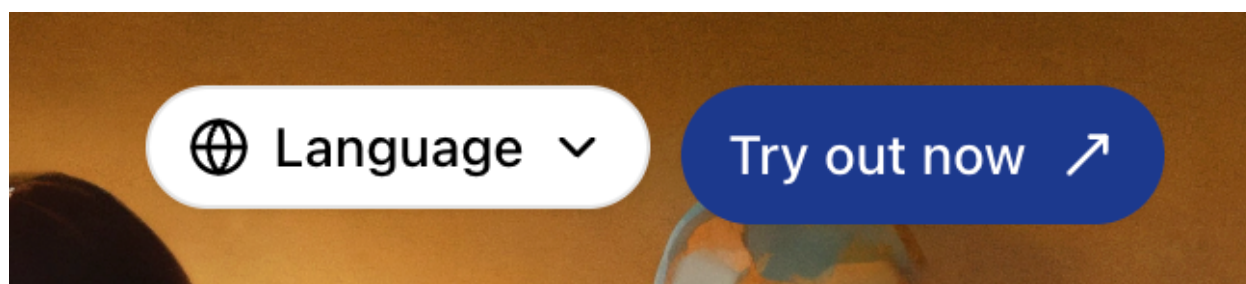


Implementation

We spent considerable time designing the PPT Generator to ensure it feels user friendly, ultimately choosing a three bar layout. The agentic AI implementation here is similar to the Weekly Planner but applied on a larger scale.

Multilingual Support

Since we're focusing on rural areas there can be a chance that our teacher might not know english, hence we needed to make our site support multiple language, hence wherever you go in our site you'll see a dropdown to change language on all sites



Implementation

We were very particular about handling this, so instead of relying on any third party service, we built our own custom language provider to minimize errors in language support. It took some time, but we can proudly say the system is reliable.

```
specifyHolidays: "Specify any holidays this week.",
holidaysPlaceholder: "e.g., Wednesday",
generatePlan: "Generate Plan",
generatingPlan: "Generating Plan...",
generateNewPlan: "Generate New Plan",
weeklyTeachingPlan: "Weekly Teaching Plan",
generatedSuccessfully: "Generated successfully",
exportPDF: "Export PDF",
translationNote: "Translation may not be accurate",
},
hi: {
  brand: "विद्यापाक",
  forEducators: "शिक्षकों के लिए",
  mainHeading: "अपने छात्रों को 3 गुना अधिक कुशलता से जोड़ने में मदद करें",
  tryNow: "अभी आजमाएं",
  madeFor: "शुजना हैकार्थॉन के लिए बनाया गया",
  language: "भाषा",
  loading: "लोड हो रहा है...",
  welcome: "स्वागत है",
  welcomeTo: "मैं आपका स्वागत है",
  heresWhat: "आज आप यह कर सकते हैं:",
  signInToAccess: "अपने डैशबोर्ड तक पहुंचने के लिए साइन इन करें",
  signInWithGoogle: "Google के साथ साइन इन करें",
  signIn: "साइन इन करें",
  signOut: "साइन आउट करें",
  classSparks: "कक्षा स्पार्क्स",
  sparksCuriosity: "कक्षा में जिज्ञासा जगाता है",
  photoToLesson: "फोटो-टू-लेसन किट",
  transformPhotos: "फोटो को पाठ योजनाओं में बदलें",
  weeklyPlanner: "साप्ताहिक योजनाकार",
  generateSchedules: "साप्ताहिक कार्यक्रम बनाएं",
  aiEasySlides: "AI आसान स्लाइड्स",
  createPresentations: "AI का उपयोग करके आसानी से प्रस्तुतियां बनाएं",
  makeClassMoreClassy: "अपनी कक्षा को और भी बेहतर बनाएं",
  initialGreeting:
    "नमस्ते! मैं आपका AI शिक्षण सहायक हूँ। आज मैं आपकी कक्षा में जिज्ञासा जगाने में कैसे मदद कर सकता हूँ?",
  personalizedGreeting:
    "नमस्ते {name}! मैं आपका AI शिक्षण सहायक हूँ। आज मैं आपकी कक्षा में जिज्ञासा जगाने में कैसे मदद कर सकता हूँ?",
  askMeAnything:
    "शिक्षण, पाठ योजनाओं या कक्षा गतिविधियों के बारे में कुछ भी पूछें...",
  yourMessageTooLong:

```

Conclusion

Vidyapak is built with a teacher first approach, focusing on saving time and making classes more engaging. With features like Class Spark, Photo to Lesson Kit, Weekly Planner, and AI PPT Maker, we aim to empower teachers, especially in rural areas, with simple yet powerful AI tools.

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