

15 JUNE 2025

# College Ikigai

dumbT

# Table of contents

01 Problem introduction

02 Technology stack

03 Trae Usage

04 Novita AI Integration

05 Further Development

06 Working Demo

# The dedicated team working intently on this presentation



Ambika Singh

Solo creator of dumbT



*Not all who wander are lost...*

Trae AI IDE: Zero Limits Hackathon

dumbT

# College Ikigai

Find your purpose, find your college. Discover your perfect college fit with AI college matchmaker





# Which college should I go to?

## **Anxiety over picking a college**

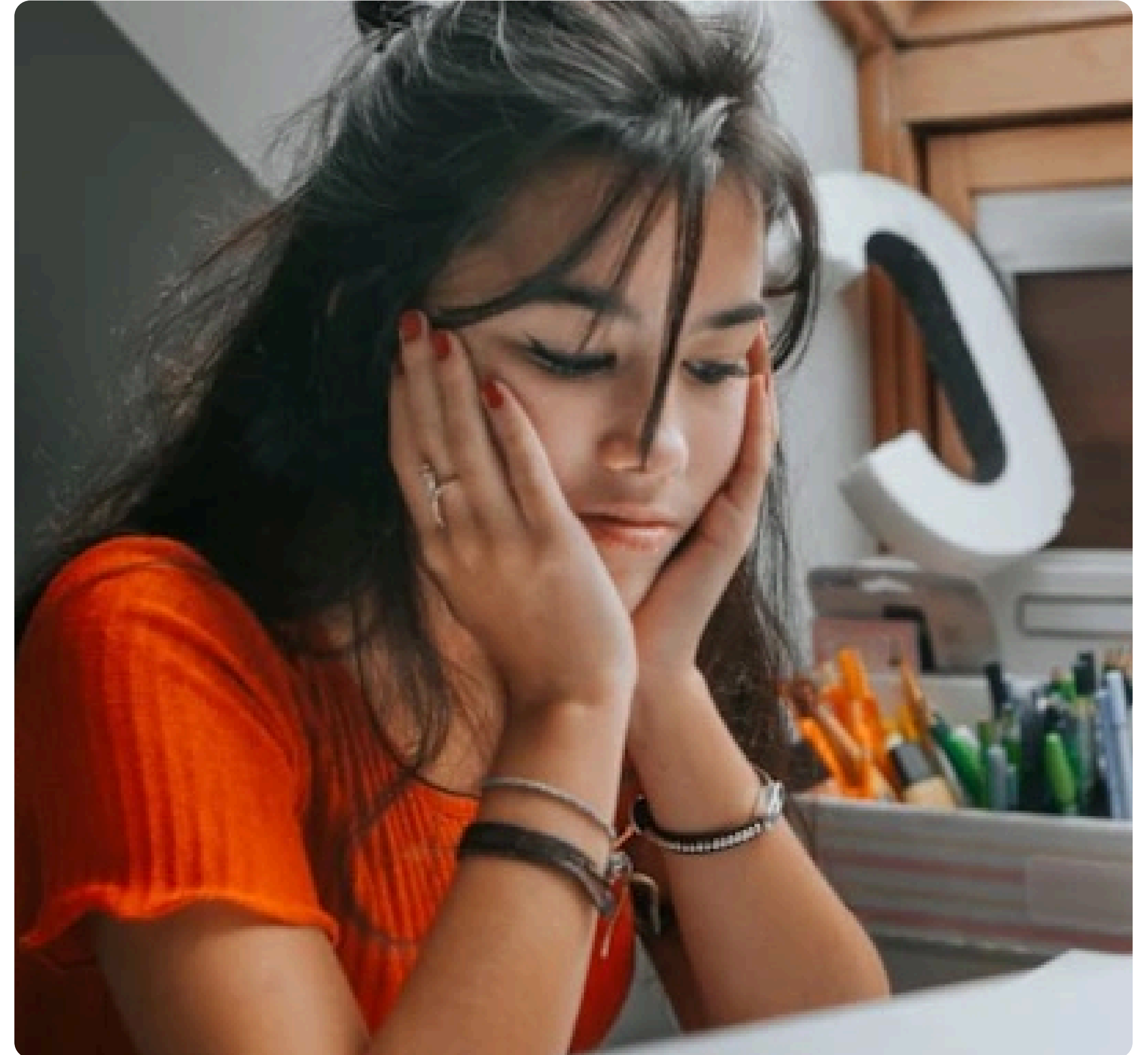
52% of high school students say they feel pressure to make decisions about their future—including selecting a college—too soon

## **A lot of information or no information**

It can be overwhelming to navigate tons of webpages finding the right colleges, it drains a lot of time and energy which can rather be used towards something more important

## **No real matching of interests and colleges**

Just selecting colleges by ranking is futile because the real important factor is the matching of interests.



# Why use College Ikigai?

## ■ Holistic Profile Matching Beyond Scores

- While many apps focus heavily on GPA and test scores, College Ikigai aims for a **more holistic approach** by deeply **considering** a **student's interests, projects, extracurriculars, and personal narrative**.
- This aligns with the **'Ikigai' concept** of finding a place where **passion, mission, vocation, and profession intersect**, suggesting a deeper, more personalized match than just academic statistics.

## ■ Focus on "Best Chance of Admission" & "Dream College"

- The application suggests a dual focus: **pragmatic** (likelihood of acceptance) and **aspirational** (finding a truly fitting environment).
- This combination can be **more appealing than tools that focus on one aspect or the other**, or simply list colleges based on broad criteria.

## ■ AI-Powered Personalized Suggestions

- College Ikigai leverages a specific AI model (**Novita AI with meta-llama/llama-3.2-1b-instruct**) to generate suggestions.
- This can lead to **more nuanced and personalized recommendations** that a student wouldn't find through traditional filter-based searches.
- It's not just about matching criteria but about understanding the **synergy between the student and potential institutions**.

## ■ Simplified, User-Focused Interface

- The current **design** appears **straightforward**: a **clear landing page leading to a single, comprehensive form**.
- This can be **less overwhelming** than applications with complex navigation or numerous filtering options, making the initial step of seeking guidance more accessible and less intimidating for students.

# Technology Stack

## 01

### Frontend

- **React:** A JavaScript library for building user interfaces.
- **HTML5 & CSS3:** For structuring the web pages and styling
- **Fetch API:** Used for making asynchronous HTTP requests to the backend API.
- **Node.js & npm (or Yarn):** For managing packages (like React itself), and running development servers.

## 02

### Backend

- **Python:** The programming language used for the server-side logic.
- **Flask:** A lightweight WSGI web application framework in Python.
- **Flask-CORS:** A Flask extension allowing the frontend to communicate with the backend API.
- **OpenAI Python Library:** Used to interact with the Novita AI API

## 03

### External Services

- **Novita AI API:** An external AI service providing the Large Language Model (**meta-llama/llama-3.2-1b-instruct**) used for generating college suggestions.

## 04

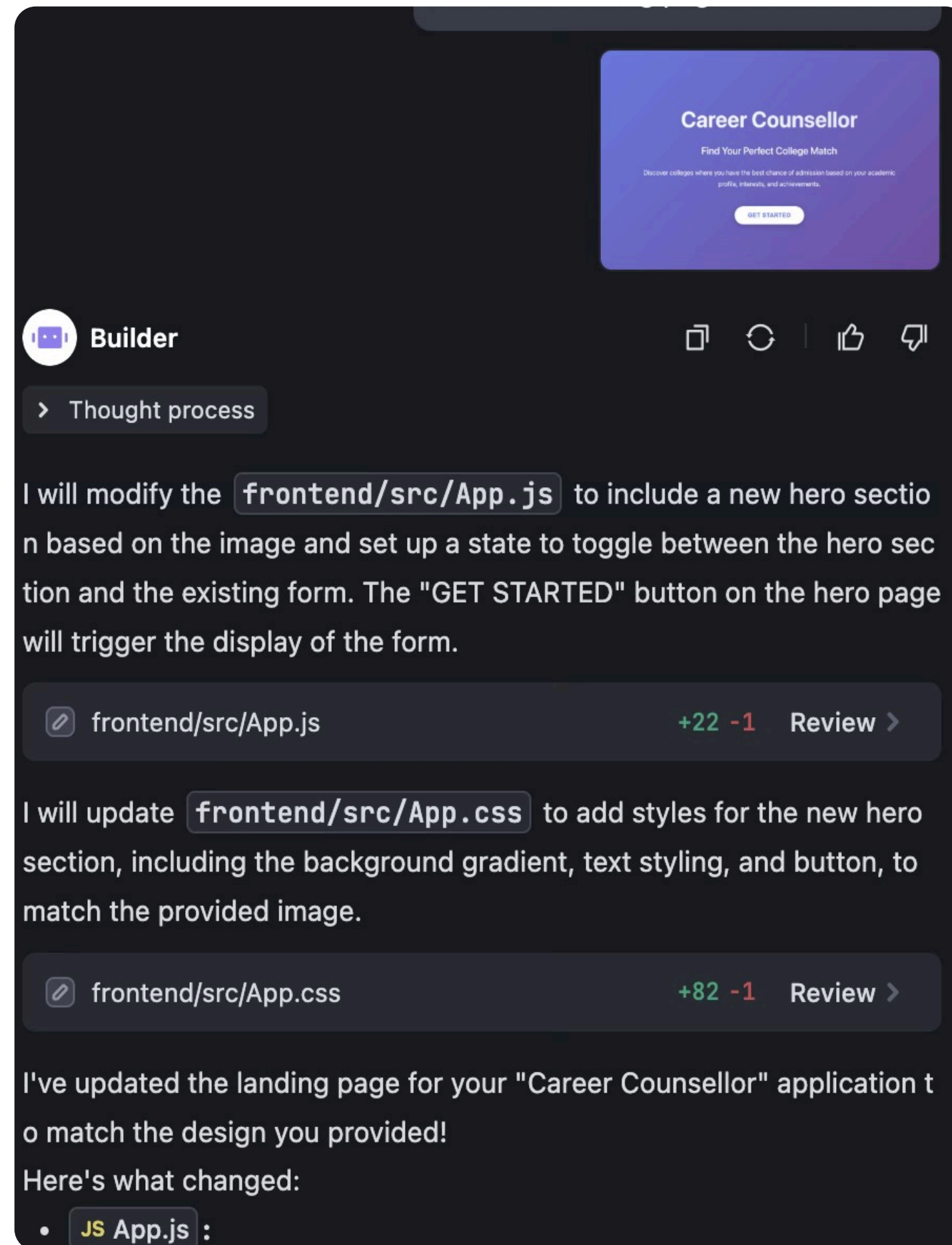
### Development tools

#### -IDE used: Trae

Trae was used for developing all the aspects of this application.

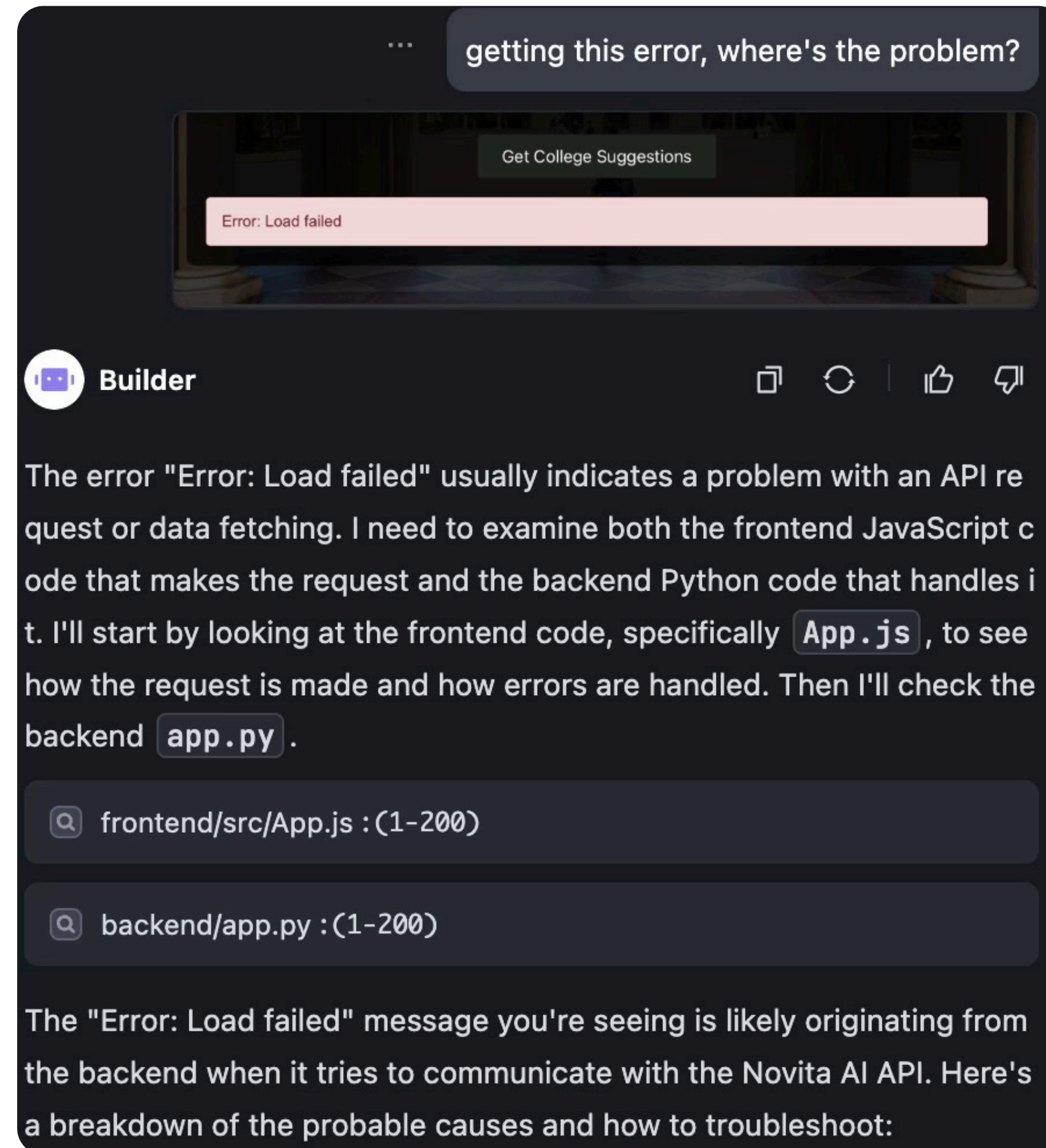


# Trae Usage



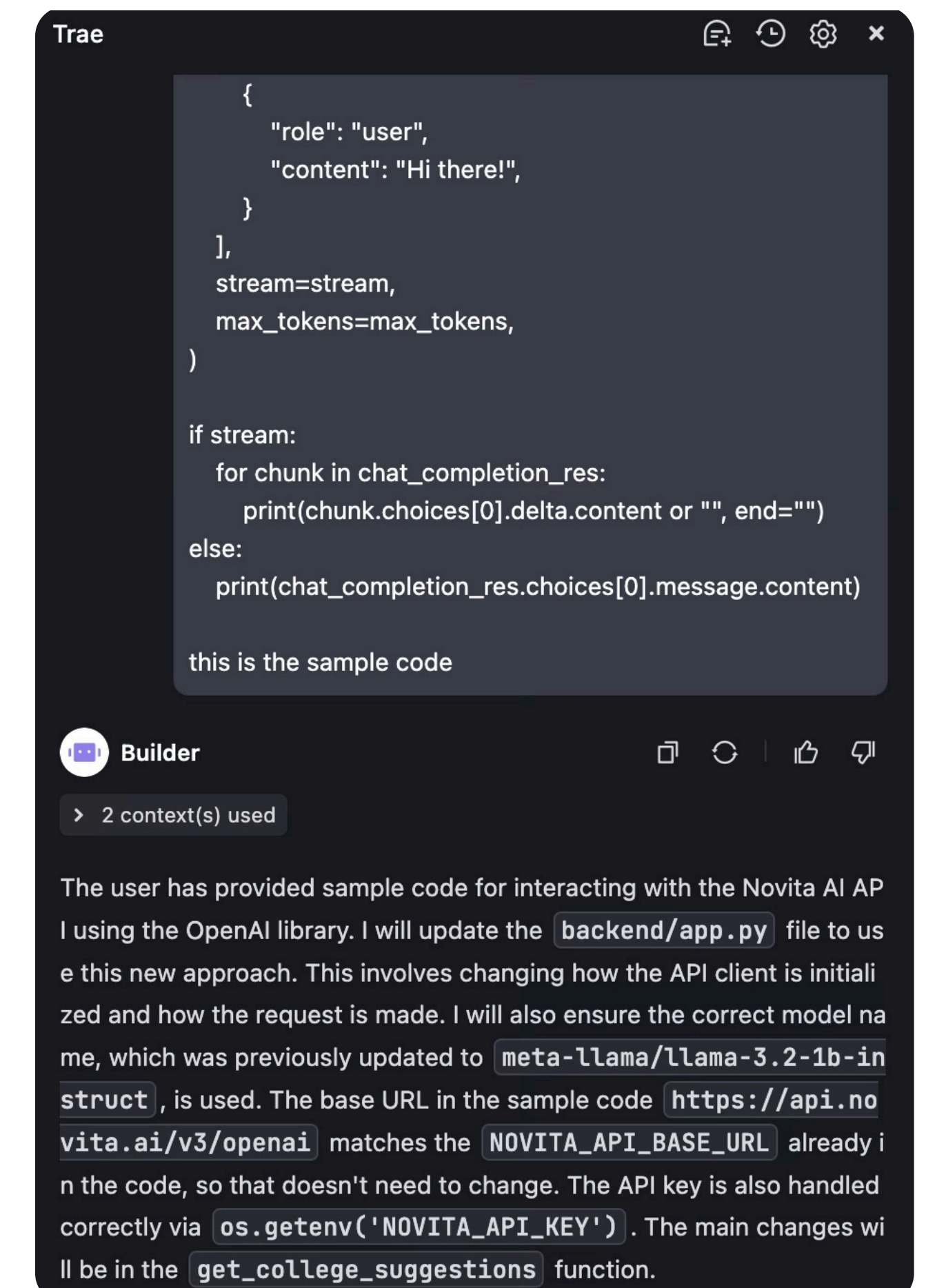
## For frontend layout

It saved a lot of time as the layout was created by Trae from a reference image



## For easy debugging

Trae was very useful in finding bugs and debugging. With just the error message on the webpage it was able to fix the problem



## Integration on Novita API

Trae was successfully able to integrate Novita AI based on the provided sample code.




# Novita AI’s API integration

- Model used: Llama 3.2 1B Instruct
- The LLM would analyse the student’s profile to suggest suitable colleges
- This model was used since it was free but better results can be obtained using a another paid models

### Model Library

⌵ Expand Filters

Find a model




Llama 3.2 1B Instruct

Chat

\$0/0 in/out MTokens | 131000 Context


Free



Llama 3.2 3B Instruct

Chat


\$0.03/0.05 in/out MTokens | 32768 Context



Llama 3.1 8B Instruct BF16

Chat

\$0.06/0.06 in/out MTokens | 8192 Context



L31 70B Euryale V2.2

Chat

\$1.48/1.48 in/out MTokens | 8192 Context

9

# Further Development Ideas

- **Fool-proofing the LLM using RAG**

LLMs can hallucinate and generate the wrong results many times. It's important to verify the information to provide the correct colleges to students

- **Adding more features**

More features like college tuition, preferred city/country, professors of interest etc can be used to provide more tailored and personalized responses

- **Adding chat with current students and alumni feature**

After providing a list of colleges a feature to chat anonymously with the current students and alumni of that college to make a well informed decision about the college

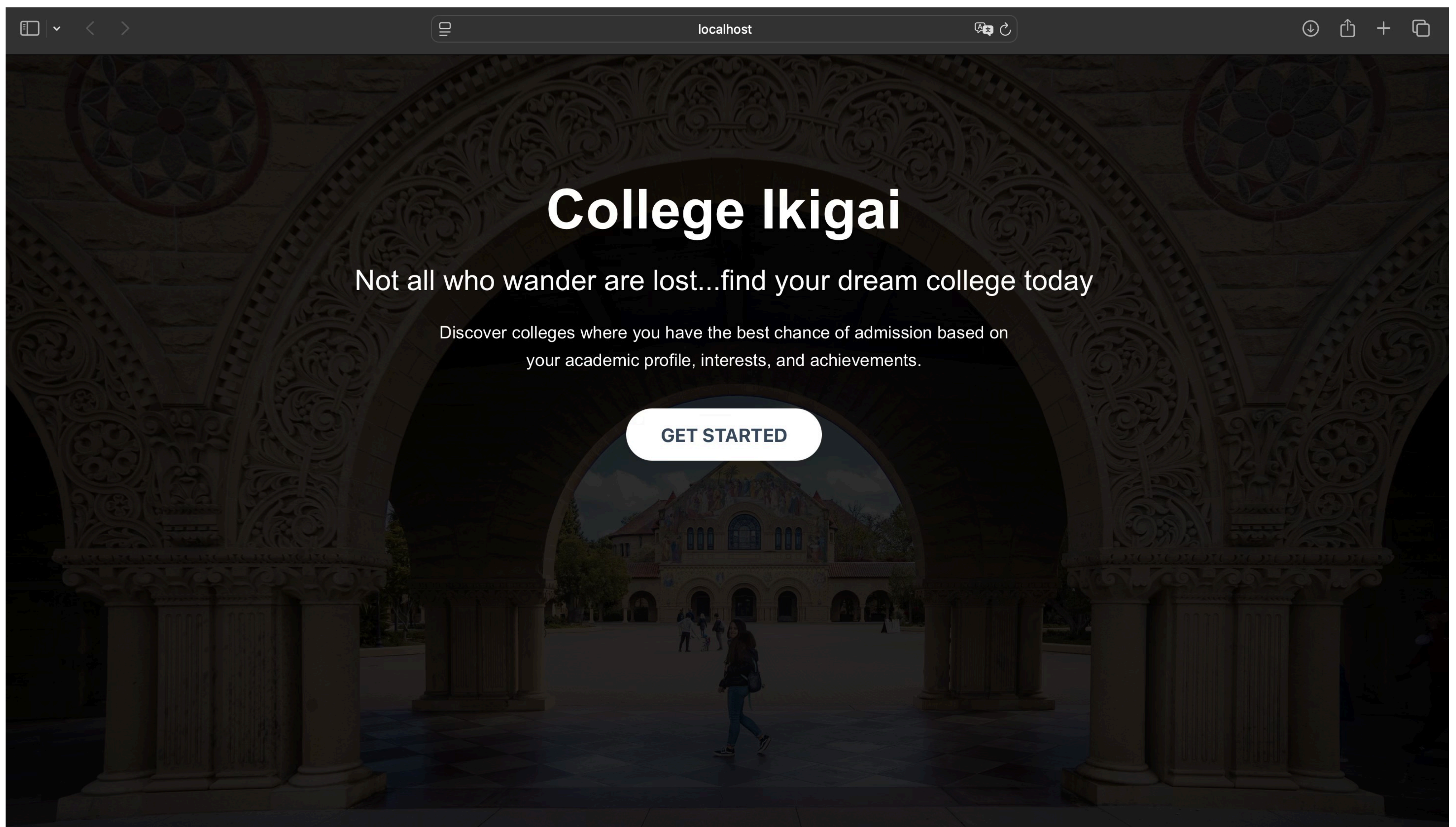
- **A chatbot and college application tool**

A chatbot to talk to about creating a personalized college application



# Working demo





Landing page: Simple, easy to get started



localhost

Tell Us About Yourself

High School GPA:

e.g., 3.8

Interests/Hobbies:

e.g., Coding, Robotics, Debating, Painting

Projects Undertaken:

e.g., Developed a weather app, Built a line-following robot

Extracurricular Activities:

e.g., President of Science Club, Varsity Soccer Team Captain

A Little About Yourself:

Briefly describe your aspirations, strengths, or anything else relevant.

Get College Suggestions

Empty profile form

localhost

Tell Us About Yourself

High School GPA:

3.2

Interests/Hobbies:

Sculpting

Projects Undertaken:

Made various sculptures for local exhibitions

Extracurricular Activities:

Sculpture club member

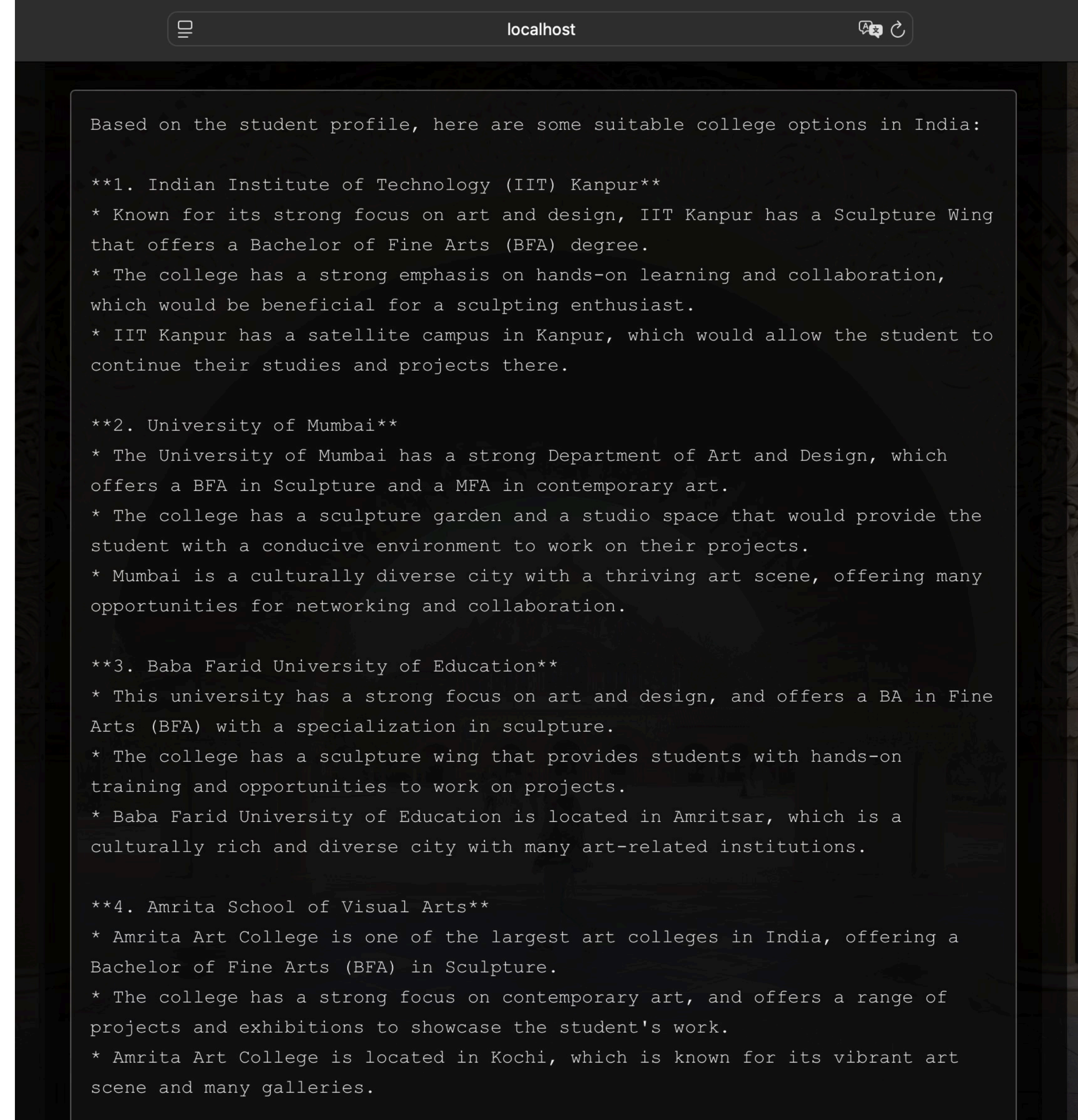
A Little About Yourself:

I like making models out of clay, looking for a college in India

Get College Suggestions

Sample profile form for suitable college suggestions





\*Response from the model: LLMS hallucinate and this information needs to be further checked factually, the app can be further developed to provide factually correct information





# Thank You!