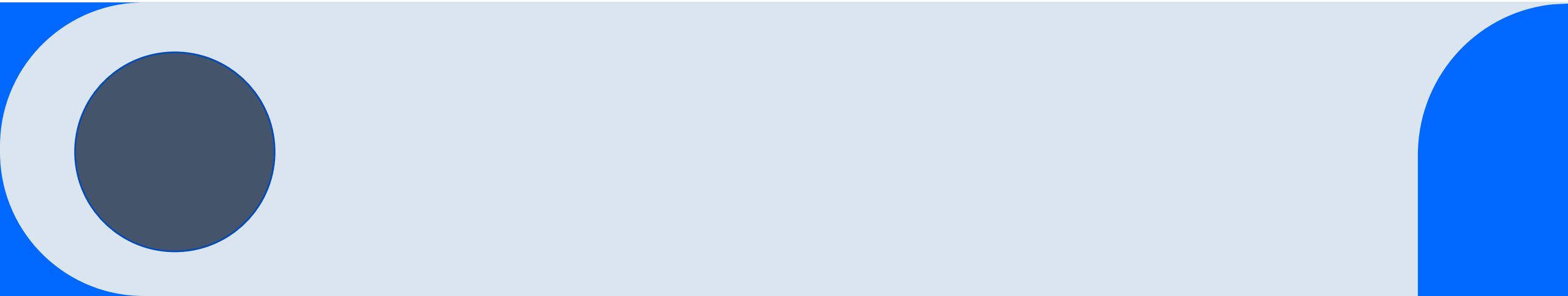
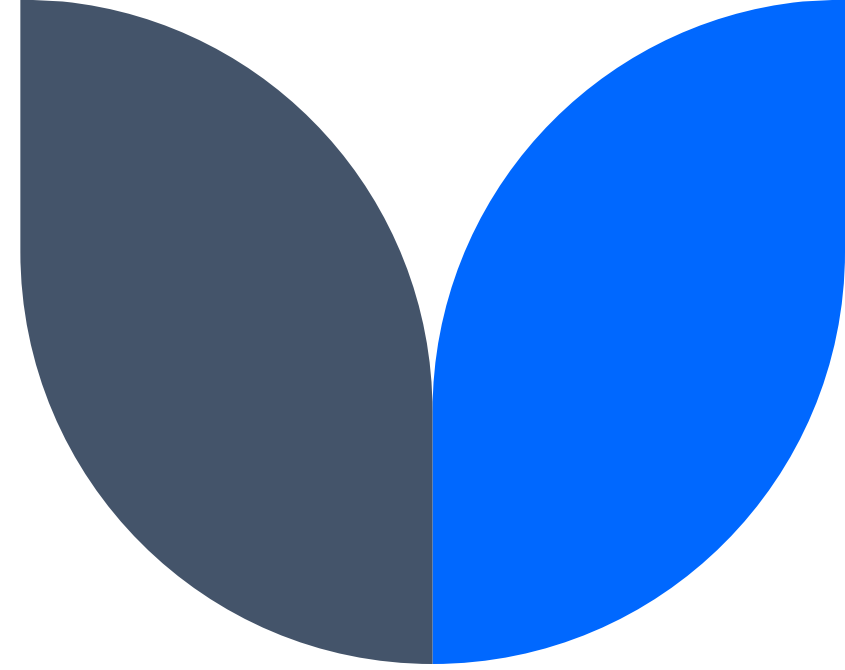




Homework Hepler: Navigating Tasks with NLP Intelligence

Makarand M Mahajan



Agenda

Introduction

Primary goals

Scope of growth

Data Analysis

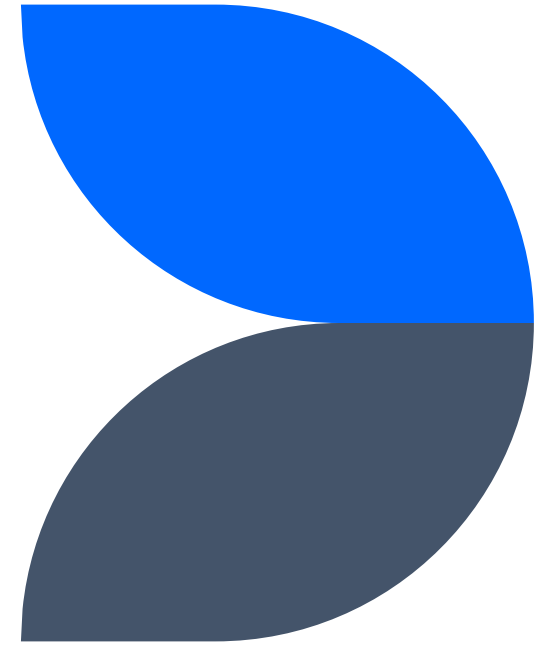
Conclusion

Introduction

In the rapidly evolving landscape of education, technology continues to play a pivotal role in reshaping traditional learning methodologies. One such ground-breaking advancement is the integration of Natural Language Processing (NLP) into educational tools, offering a transformative approach to student support.

Primary goals

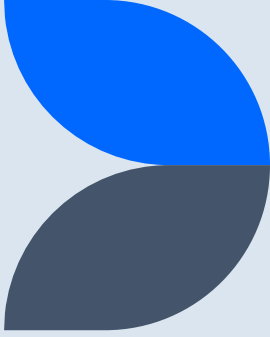
Bridging the Learning Gap



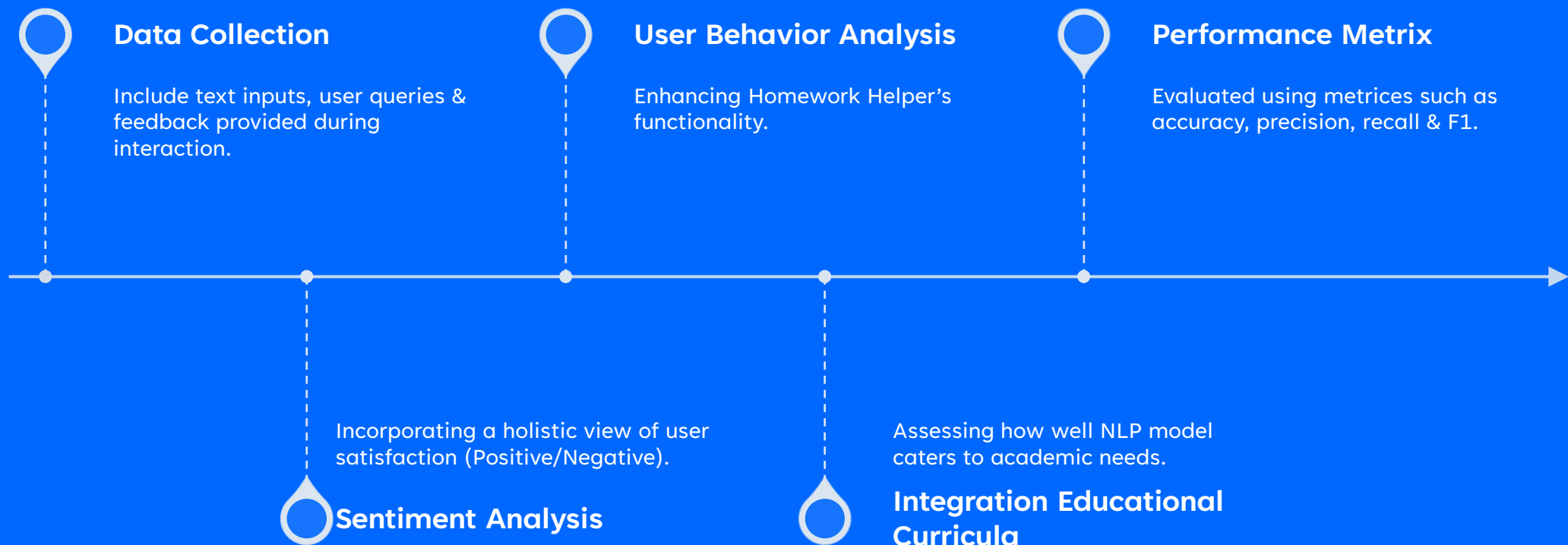
Primary goals

- Automating Homework Assistance
- Personalized Learning Experience
- Multidisciplinary Support
- Continuous Improvement
- Accessibility and Inclusivity

Scope of the Project

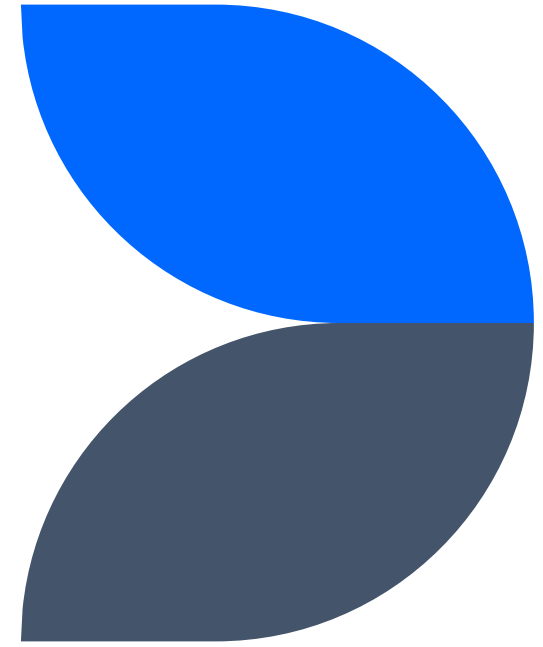


Data Analysis

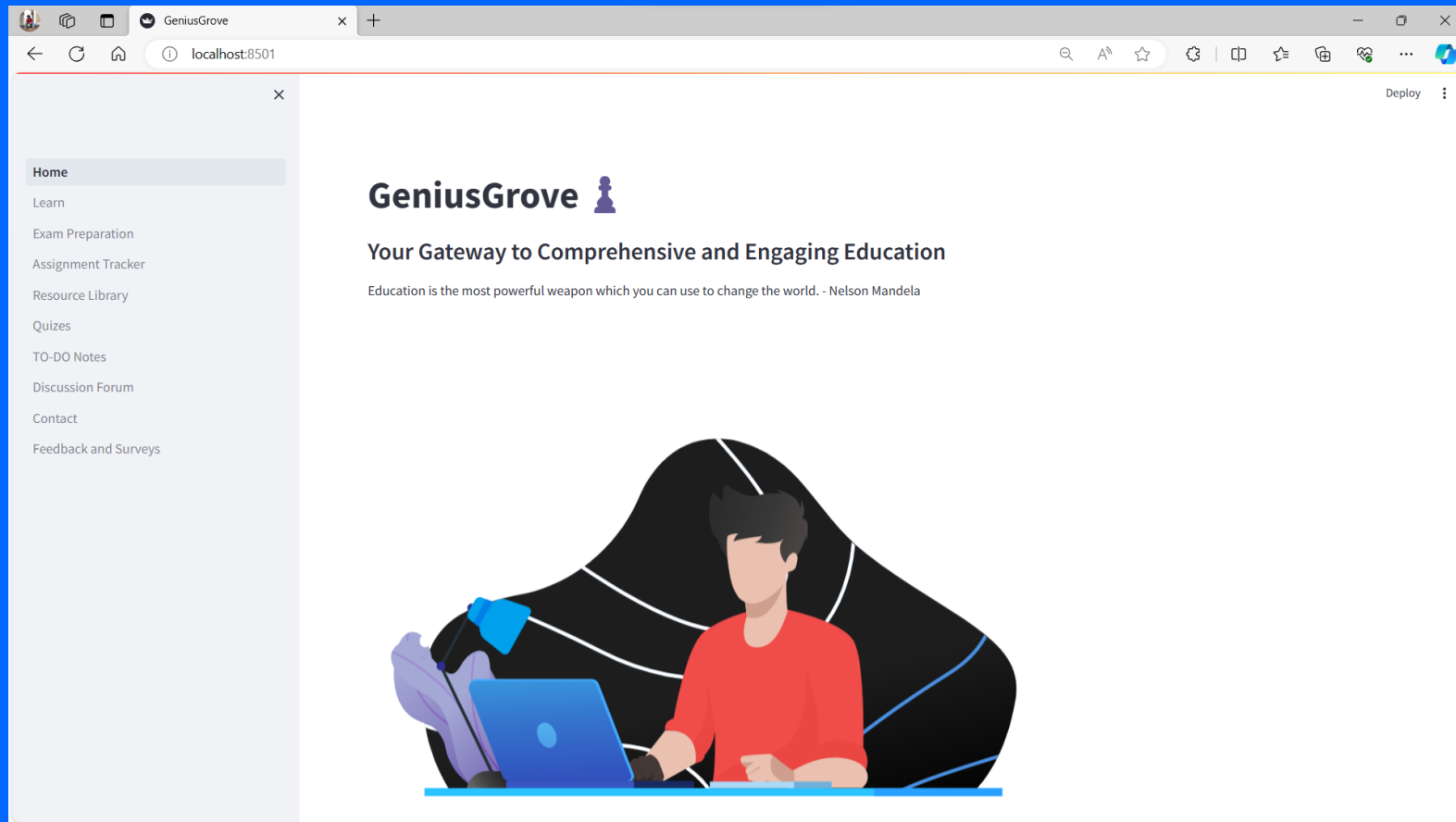


Project Overview

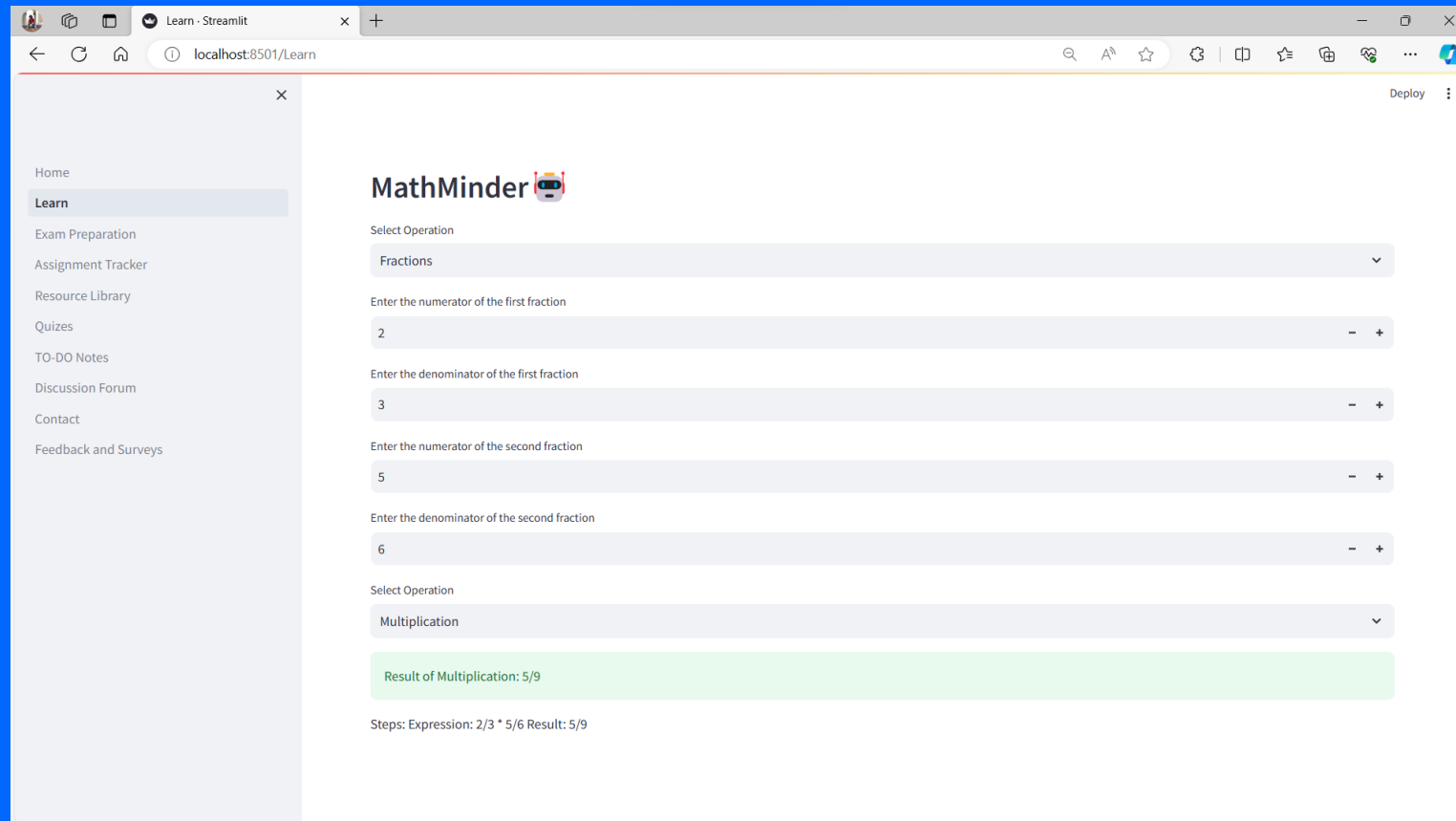
Understanding Project's Purpose



1. Home Page



2. Learn Page



The screenshot displays the MathMinder web application interface. The browser window shows the URL `localhost:8501/Learn`. The application has a sidebar menu on the left with the following items: Home, Learn (selected), Exam Preparation, Assignment Tracker, Resource Library, Quizzes, TO-DO Notes, Discussion Forum, Contact, and Feedback and Surveys. The main content area is titled "MathMinder" with a robot icon. It contains two calculation sections. The first section, "Fractions", has input fields for the numerator (2) and denominator (3) of the first fraction, and the numerator (5) and denominator (6) of the second fraction. The second section, "Multiplication", shows the result "Result of Multiplication: 5/9" in a green box. At the bottom, it displays the steps: "Steps: Expression: $2/3 * 5/6$ Result: $5/9$ ".

3. Assessment Tracker Page

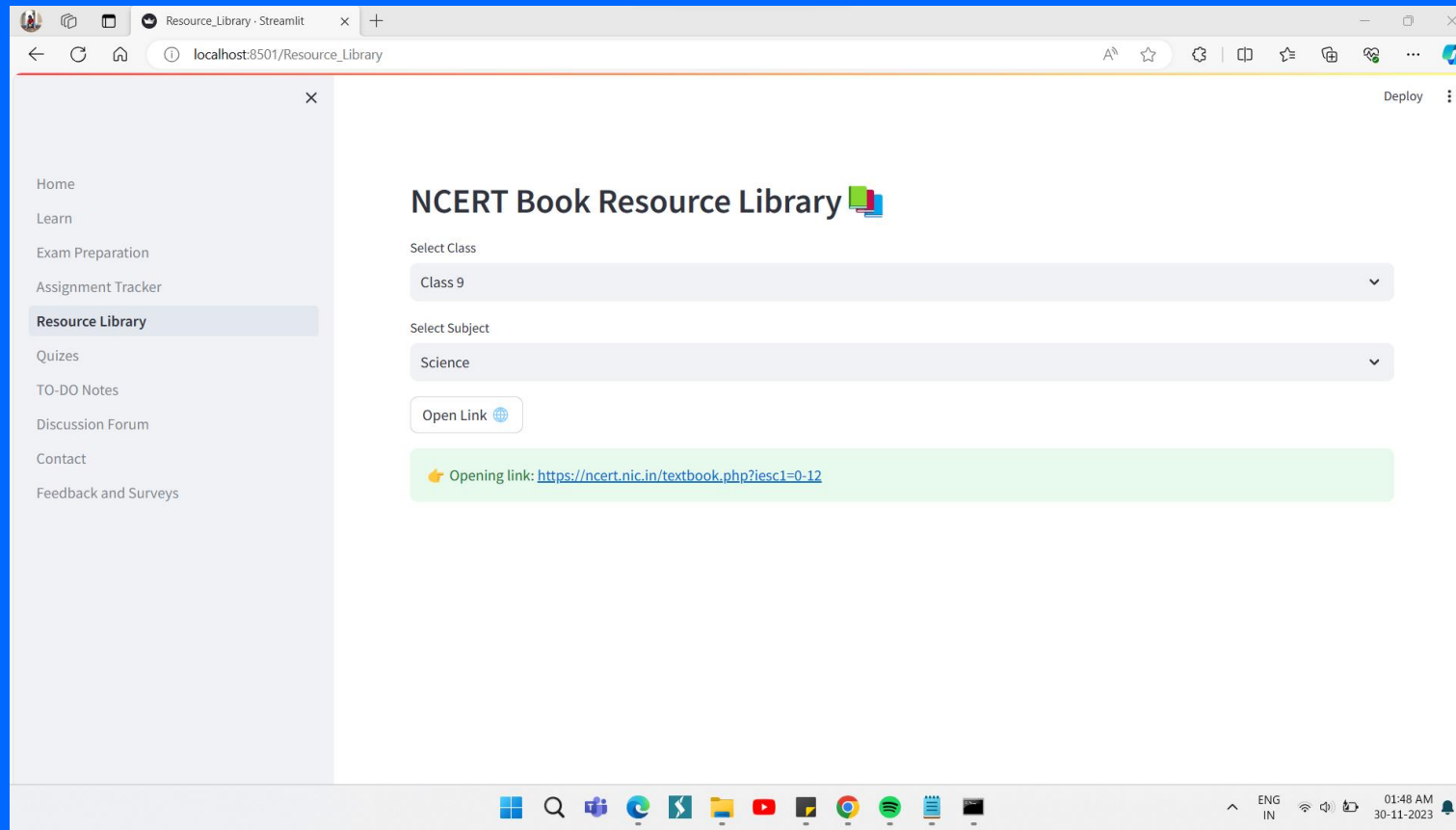
The screenshot shows a web application titled "Assignment Tracker" running on a Streamlit interface. The browser address bar shows "localhost:8501/Assignment_Tracker". The sidebar on the left contains the following links: Home, Learn, Exam Preparation, Assignment Tracker (highlighted), Resource Library, Quizzes, TO-DO Notes, Discussion Forum, Contact, and Feedback and Surveys.

The main content area is divided into three sections:

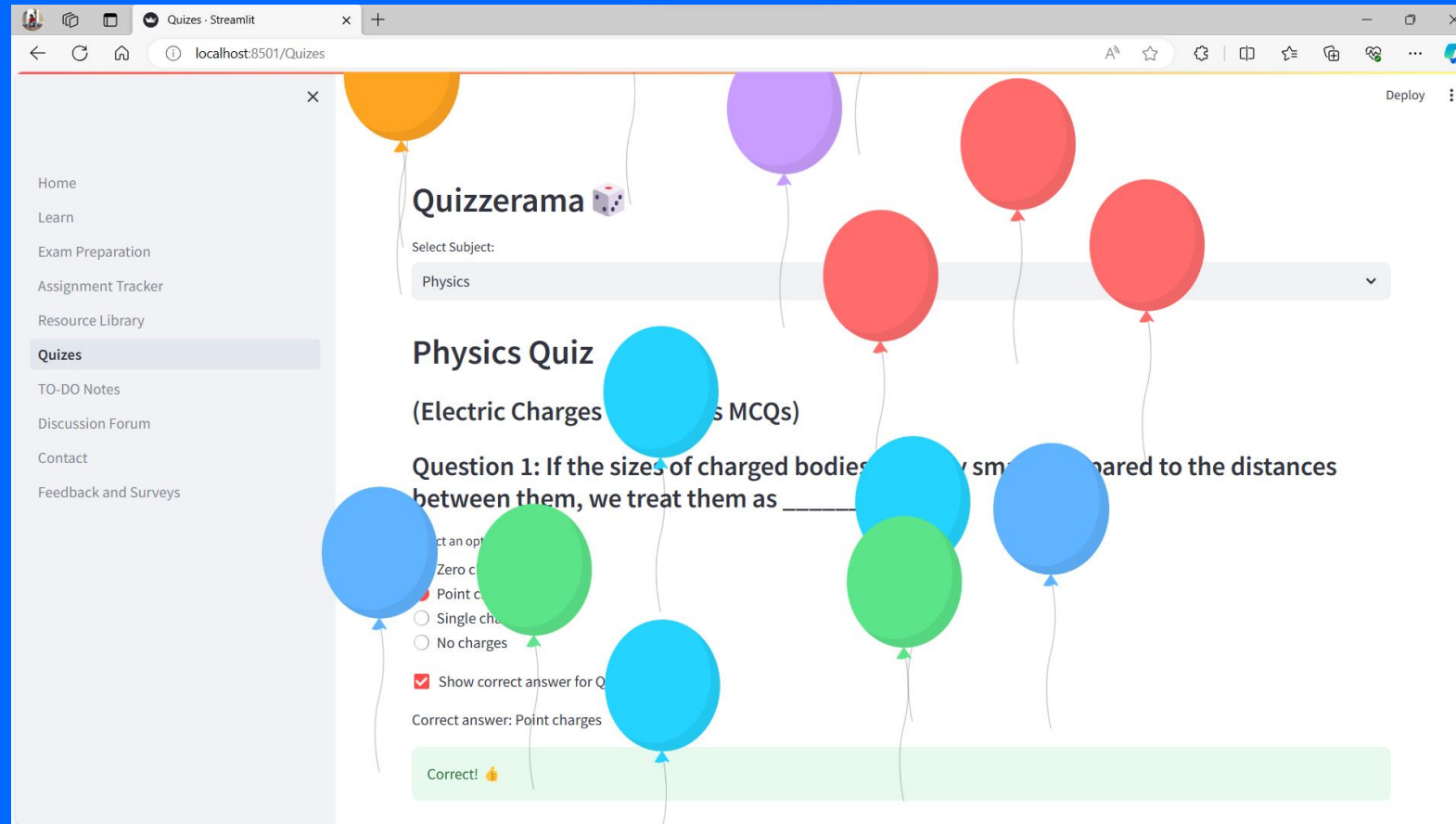
- Task Monitor**: Includes an "Assign Task" button, a text input field containing "Mathematics Submission", a "Description" section with a list: "1. Differential Equations" and "2. Integrations", a "Due Date" section with the date "2023/11/30", and an "Assign Task" button.
- Assignments Dues**: A table with the following data:

	Subject	Description	Due Date	Status
0	Mathematics Submission	1. Differential Equations 2. Integrations	2023-11-30	Not Completed
- Update Assignment Status**: Includes a "Select Assignment" dropdown menu with "Mathematics Submission" selected, a "Update Status" section with radio buttons for "Not Completed" (selected) and "Completed", and an "Update Status" button.

4. Resource Library Page



5. Quizzerama



6. Checklist Page

The screenshot shows a web browser window with the address bar displaying 'localhost:8501/TO-DO_Notes'. The page has a sidebar on the left with a menu containing: Home, Learn, Exam Preparation, Assignment Tracker, Resource Library, Quizzes, **TO-DO Notes** (highlighted), Discussion Forum, Contact, and Feedback and Surveys. The main content area is titled 'Checklist' with a checkmark icon. It features a form to 'Add a new task' with a text input field containing 'Prepare a healthy breakfast.', a 'Due Date' field with '2023/11/30', and a 'Due Time' dropdown menu set to '00:15'. Below the form is an 'Add Task' button. Under the 'Listed Tasks:' section, there is a list of tasks with checkboxes: 'Avoid the snooze button. - Due: 2023-11-30 00:00' (checked), 'Give yourself enough time to get to work. - Due: 2023-11-30 00:00', 'Drink a full glass of water. - Due: 2023-11-30 00:00', and 'Prepare a healthy breakfast. - Due: 2023-11-30 00:15'. At the bottom of the task list are two buttons: 'Remove Completed Tasks' and 'Clear Task List'.

TO-DO_Notes - Streamlit morning routine for students - G x +

localhost:8501/TO-DO_Notes

Deploy

Checklist ✓

Add a new task:

Prepare a healthy breakfast.

Due Date

2023/11/30

Due Time

00:15

Add Task

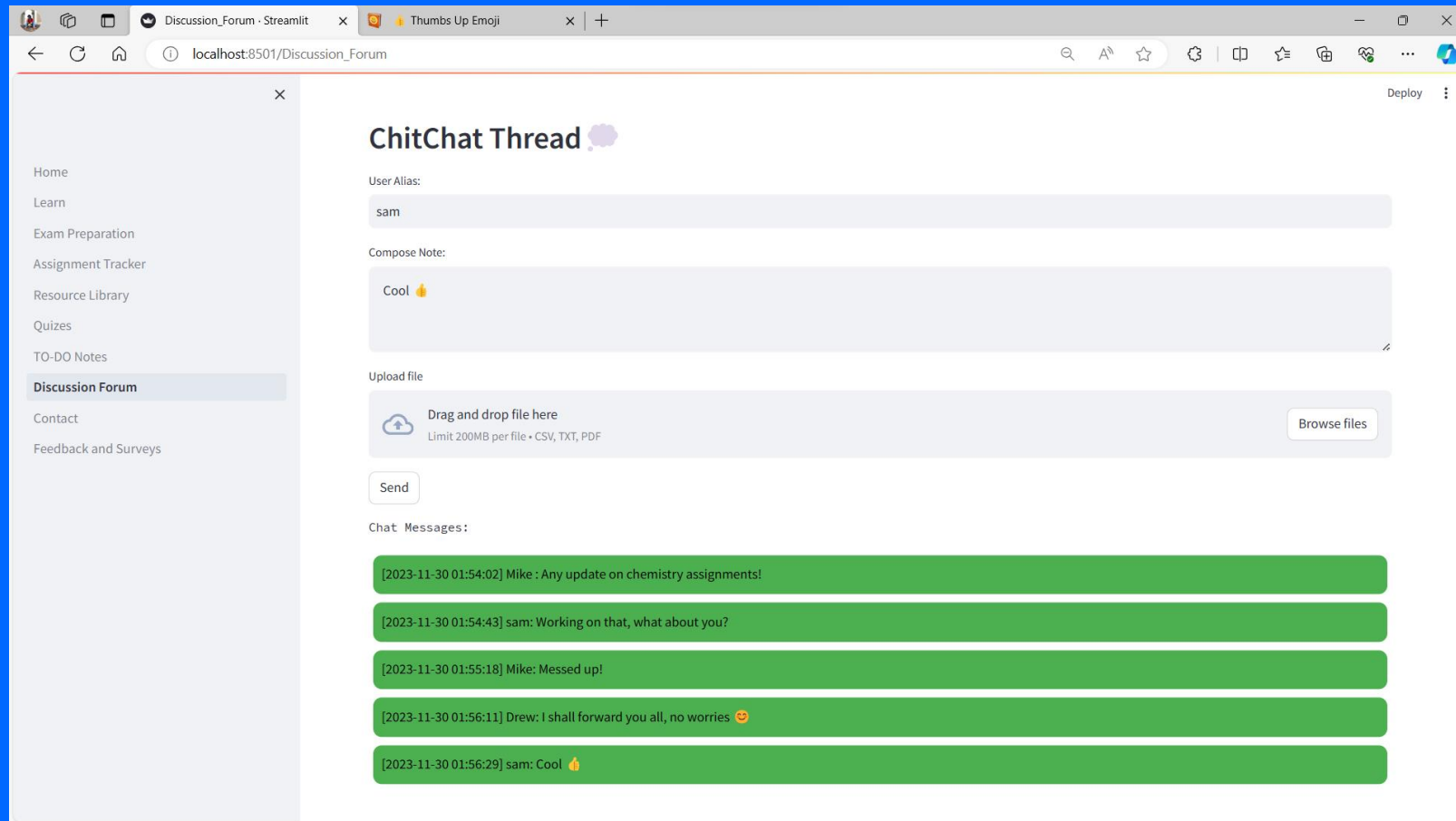
Listed Tasks:

- ☒ Avoid the snooze button. - Due: 2023-11-30 00:00
- ☐ Give yourself enough time to get to work. - Due: 2023-11-30 00:00
- ☐ Drink a full glass of water. - Due: 2023-11-30 00:00
- ☐ Prepare a healthy breakfast. - Due: 2023-11-30 00:15

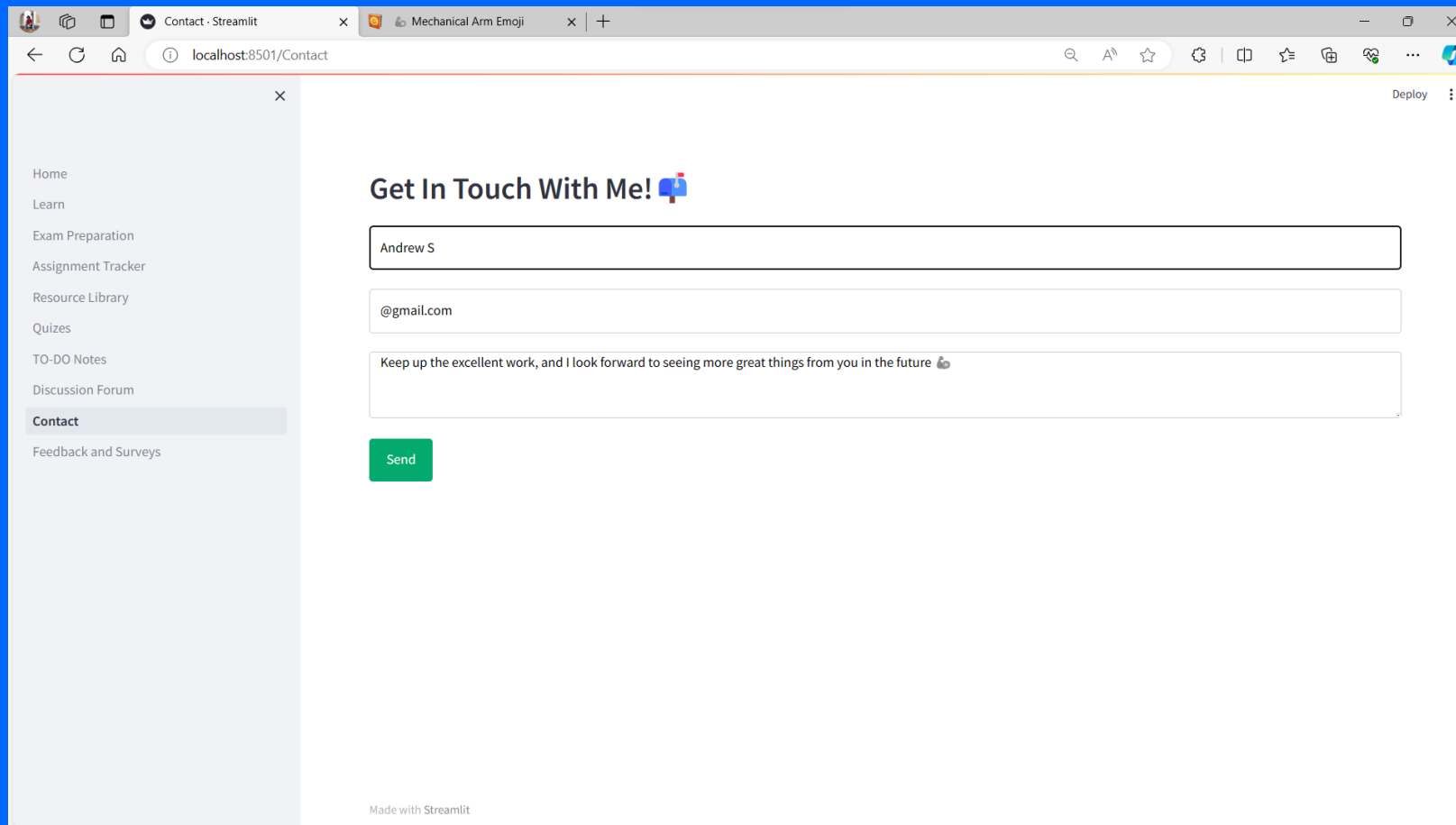
Remove Completed Tasks

Clear Task List

7. Discussion Forum

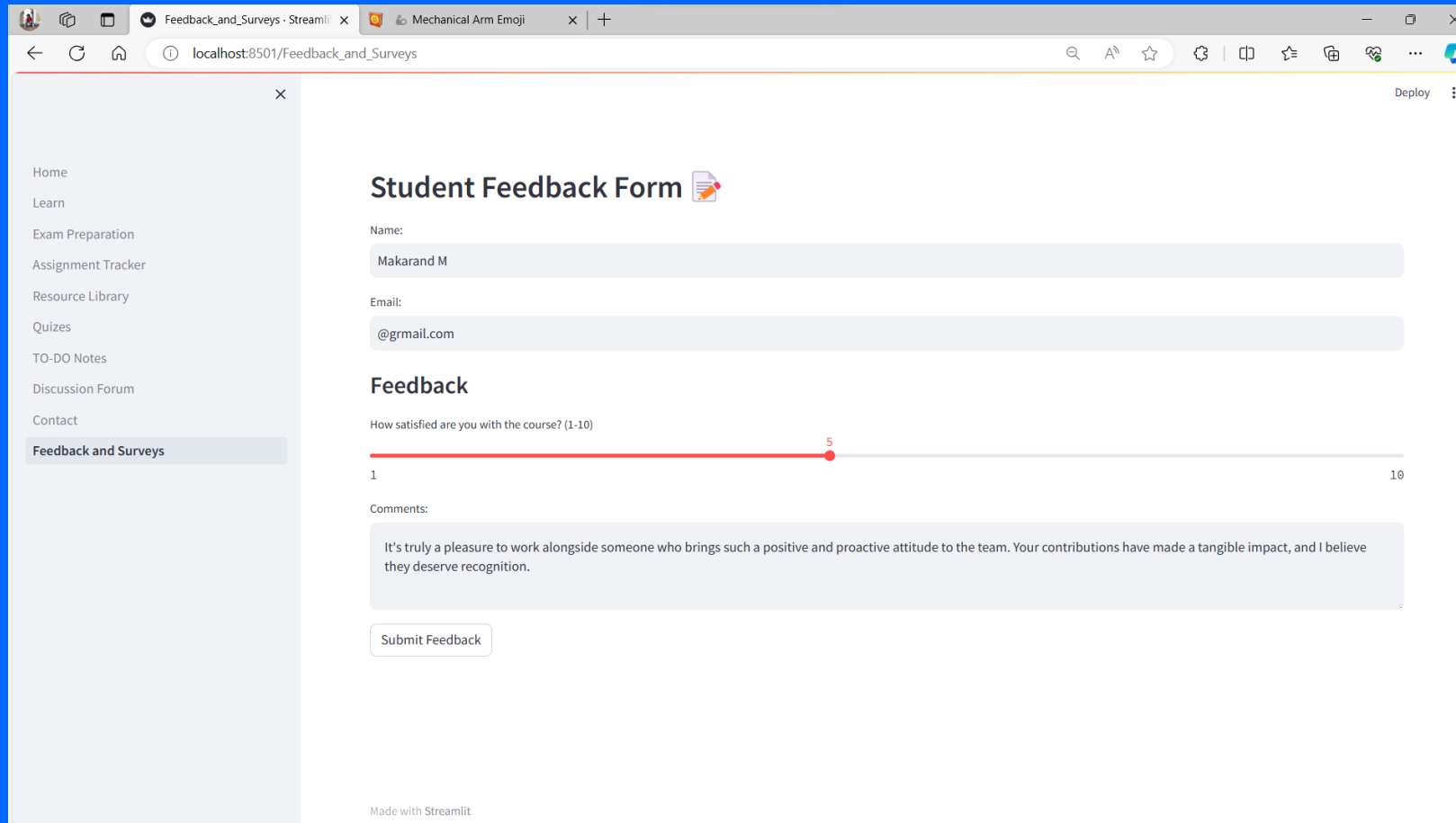


8. Contact Page



The screenshot shows a web browser window with two tabs: 'Contact - Streamlit' and 'Mechanical Arm Emoji'. The address bar displays 'localhost:8501/Contact'. The page features a sidebar on the left with the following links: Home, Learn, Exam Preparation, Assignment Tracker, Resource Library, Quizes, TO-DO Notes, Discussion Forum, **Contact** (highlighted), and Feedback and Surveys. The main content area is titled 'Get In Touch With Me!' with a mail icon. It contains three input fields: the first has 'Andrew S', the second has '@gmail.com', and the third has the message 'Keep up the excellent work, and I look forward to seeing more great things from you in the future 🙌'. Below the message field is a green 'Send' button. At the bottom right of the page, it says 'Made with Streamlit'.

9. Feedback Page



The screenshot displays a web browser window with the URL `localhost:8501/Feedback_and_Surveys`. The browser tabs show 'Feedback_and_Surveys - Streamlit' and 'Mechanical Arm Emoji'. The application interface features a sidebar on the left with the following menu items: Home, Learn, Exam Preparation, Assignment Tracker, Resource Library, Quizzes, TO-DO Notes, Discussion Forum, Contact, and Feedback and Surveys (which is currently selected). The main content area is titled 'Student Feedback Form' with a document icon. It contains the following elements:

- Name:** A text input field containing 'Makarand M'.
- Email:** A text input field containing '@gmail.com'.
- Feedback:** A section titled 'Feedback' with the question 'How satisfied are you with the course? (1-10)'. Below this is a horizontal slider with a red line and a red dot at the value 5. The slider has markers at 1 and 10.
- Comments:** A text area containing the text: 'It's truly a pleasure to work alongside someone who brings such a positive and proactive attitude to the team. Your contributions have made a tangible impact, and I believe they deserve recognition.'
- Submit Feedback:** A button located below the comments text area.

At the bottom of the page, it says 'Made with Streamlit'.

Conclusion

The project has successfully showcased a statistically significant improvement in academic performance across diverse subjects, with a particular emphasis on mathematics and science. The real-time feedback and personalized assistance mechanisms embedded within the NLP based system have played a pivotal role in elevating students' comprehension and problem-solving skills.



Thank you

Makarand M Mahajan