Vahan AI- AI Intern Enhanced Interactive Learning Assistant - Project Report

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Project Overview

The **Enhanced Interactive Learning Assistant** is an AI-powered educational tool that utilizes Streamlit for the user interface and Gemini AI for generating personalized learning content. The application aims to personalize learning experiences by interacting with users to understand their goals and preferences. The assistant generates tailored educational content, including citations, visual aids, and follow-up learning paths, ensuring a comprehensive learning experience. The project can be deployed locally or via Docker for easier setup and scalability.

Tech Stack

- **Frontend**: Streamlit
- **Backend**: Gemini AI (for generating content)
- **Programming Language**: Python
- **Libraries**: Streamlit, OpenAI, Docker, Python-dotenv
- **Docker**: For containerized deployment of the application
- **Version Control**: GitHub for code management and version control

Features

- **Interactive Q&A**: Collect user preferences and goals to customize the learning experience.
- **Personalized Educational Content**: Tailored to the user's needs, complete with citations and visual aids.
- **Structured Reports**: Well-organized educational content, including citations and references for each learning session.
- **Follow-up Customization**: The system adapts and refines content based on user feedback and additional questions.
- **Docker Support**: The project can be run in a Docker container for easy deployment and scaling.

Setup Instructions

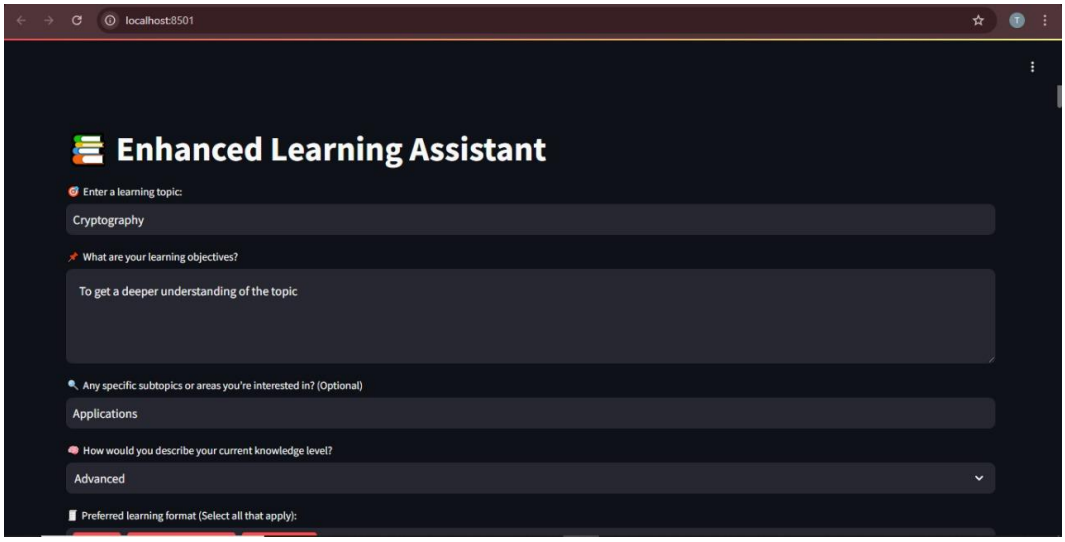
Please refer to the Readme file in the repository for this.

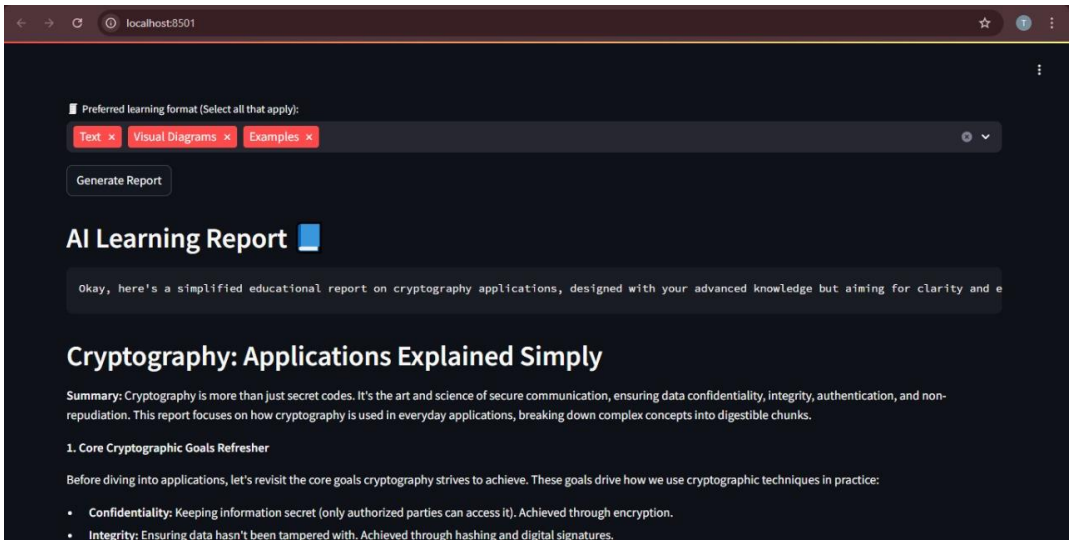
Sample Output

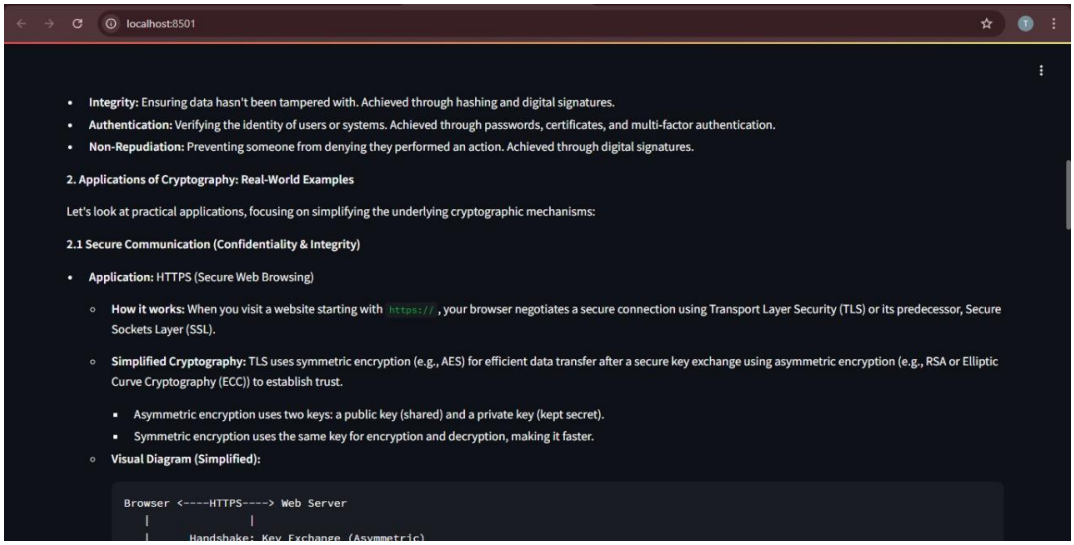
Below is a sample of the personalized learning report generated by the assistant:

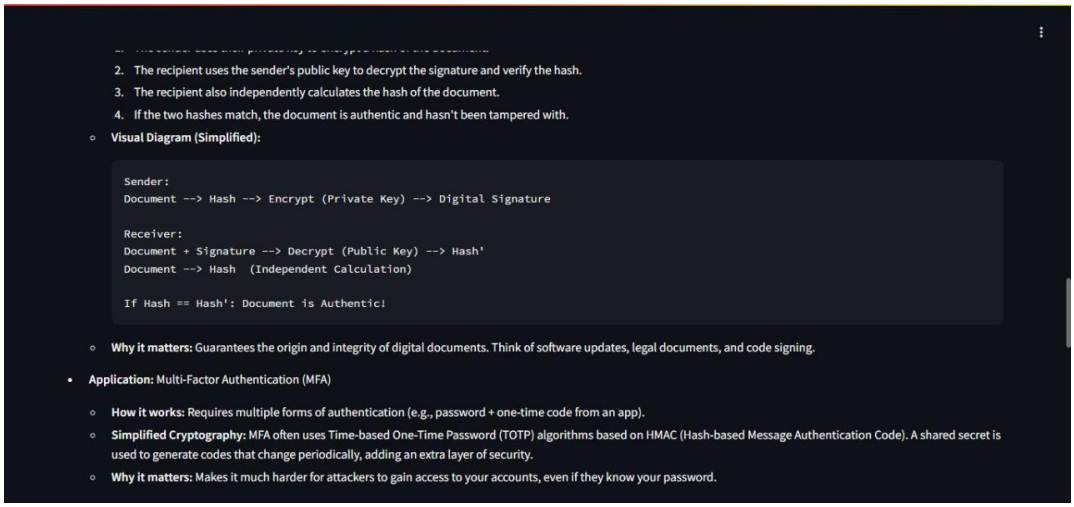
Sample Input-Output 1:

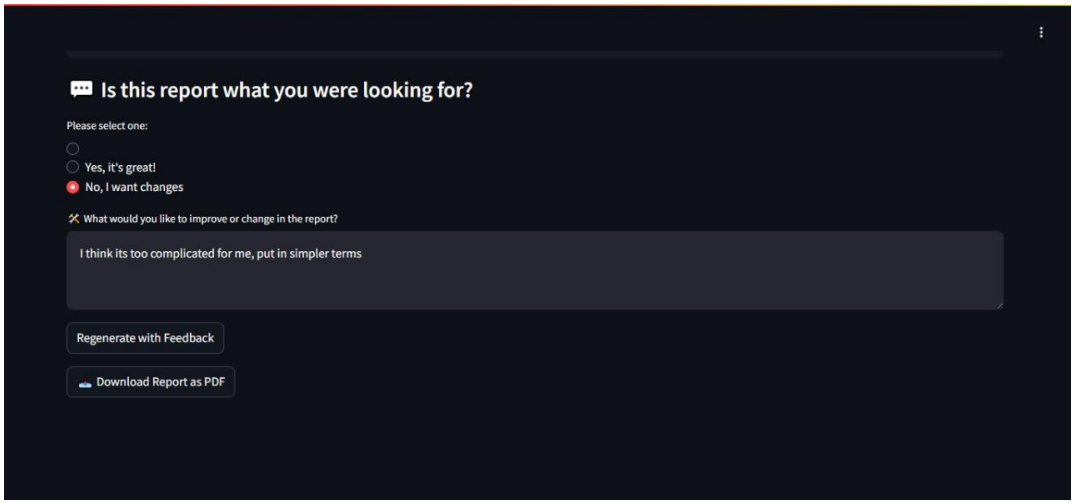
Asking Instructor to regenerate the information as well based on feedback after it generates the first report.







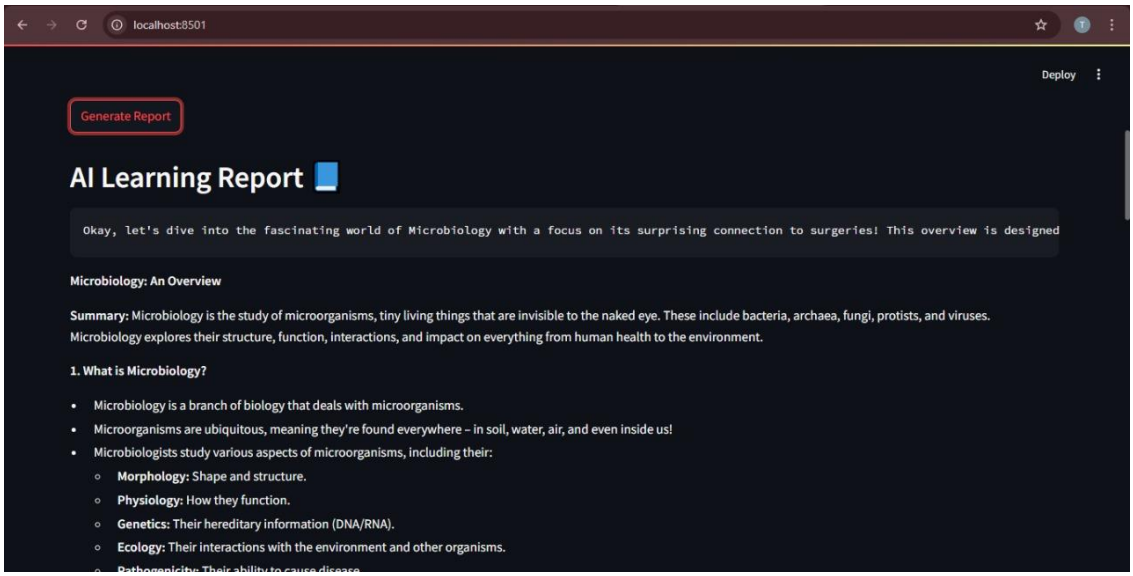


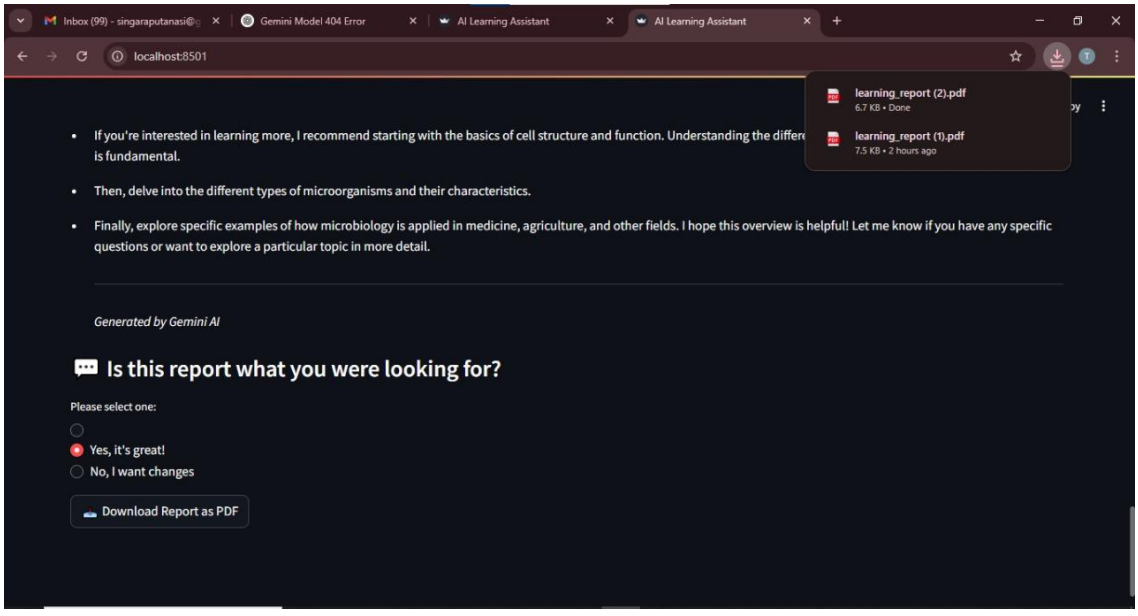


Sample Input-Output 2:

Downloading as PDF here as well


localhost:8501
Deploy
Enhanced Learning Assistant
Enter a learning topic:
Microbiology
What are your learning objectives?
My objective is to learn more about microbiology and get a overview about it
Any specific subtopics or areas you're interested in? (Optional)
Surgeries in Microbiology
How would you describe your current knowledge level?
Beginner
Preferred learning format (Select all that apply):
Text
Step-by-step exp...


localhost:8501
Deploy
Generate Report
AI Learning Report
Okay, let's dive into the fascinating world of Microbiology with a focus on its surprising connection to surgeries! This overview is designed
Microbiology: An Overview
Summary: Microbiology is the study of microorganisms, tiny living things that are invisible to the naked eye. These include bacteria, archaea, fungi, protists, and viruses. Microbiology explores their structure, function, interactions, and impact on everything from human health to the environment.
1. What is Microbiology?
Microbiology is a branch of biology that deals with microorganisms.
Microorganisms are ubiquitous, meaning they're found everywhere – in soil, water, air, and even inside us!
Microbiologists study various aspects of microorganisms, including their:
Morphology: Shape and structure.
Physiology: How they function.
Genetics: Their hereditary information (DNA/RNA).
Ecology: Their interactions with the environment and other organisms.


Inbox (99) - singaraputanasi@
Gemini Model 404 Error
AI Learning Assistant
AI Learning Assistant
localhost:8501
learning_report (2).pdf
6.7 KB • Done
learning_report (1).pdf
7.5 KB • 2 hours ago
If you're interested in learning more, I recommend starting with the basics of cell structure and function. Understanding the differ
is fundamental.
Then, delve into the different types of microorganisms and their characteristics.
Finally, explore specific examples of how microbiology is applied in medicine, agriculture, and other fields. I hope this overview is helpful! Let me know if you have any specific questions or want to explore a particular topic in more detail.
Generated by Gemini AI
Is this report what you were looking for?
Please select one:
Yes, it's great!
No, I want changes
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