

Progress Report #3	
<b>Course Code:</b> CPE201L	<b>Program:</b> Computer Engineering
<b>Course Title:</b> Data Structures and Algorithm	<b>Date Performed:</b> September 20, 2025
<b>Section:</b> CpE - 2A	<b>Date Submitted:</b> September 20, 2025
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<b>1. Objectives</b>	
<ul style="list-style-type: none"> <li>● To enhance the efficiency and error resolution of the current AIMSsist chatbot</li> <li>● To add more procedures related to the AIMS portal to a knowledge base</li> <li>● To improve the conversation handling and queue management</li> <li>● To improve the user interface testing capability and user experience</li> <li>● To display steady development progress while preserving the use of queue only data structures</li> </ul>	
<b>2. Discussion</b>	
<p>In this progress report we continued our work last time and successfully fixed the critical conversation history error that was preventing messages from displaying correctly between users and the chatbot, we fixed it by having the chatbot send the original message back with its answer. We also expanded the system's capabilities by adding a new procedure for payment help to the knowledge base, allowing the chatbot to now provide step-by-step instructions for enrollment, grades, and payments on the AIMS portal. The core queue system moving messages from input queue to processing queue to response queue and finally to conversation history continues to operate reliably using its FIFO principle. Furthermore, we made minor interface improvements, including adding a clear chat button and enhancing the display of queue status information for better user clarity.</p>	
<b>3. Materials and Equipment</b>	
<ul style="list-style-type: none"> <li>● PyCharm</li> <li>● Streamlit</li> <li>● Python</li> <li>● Github</li> </ul>	
<b>4. Procedure</b>	
<ol style="list-style-type: none"> <li>1. Fix the conversation history bug by just locating the add_response() method in the codebase. Ensure the response object includes the original_message field.</li> <li>2. Test the conversation history or test the system to verify that all responses are correctly added to the history, and the original_message is now displayed in the UI.</li> <li>3. Add new AIMS Procedure and implement the procedure in the chatbot logic. In the chatbot's flow, check if the user's query matches the payment_help procedure and respond accordingly.</li> <li>4. We enhance the User Interface by adding a "Clear Chat" button and timestamp display. In our frontend code), add a button to clear the conversation.</li> <li>5. Modify the UI to display timestamps next to each message.</li> <li>6. Verify that the "Clear Chat" button works properly and clears both the UI and the backend history.</li> </ol>	

7. Add a quick test button for payment queries by adding including a button in the UI that stimulates a payment query.
8. Once all changes are implemented, test the system to check that everything works correctly.

## 5. Output

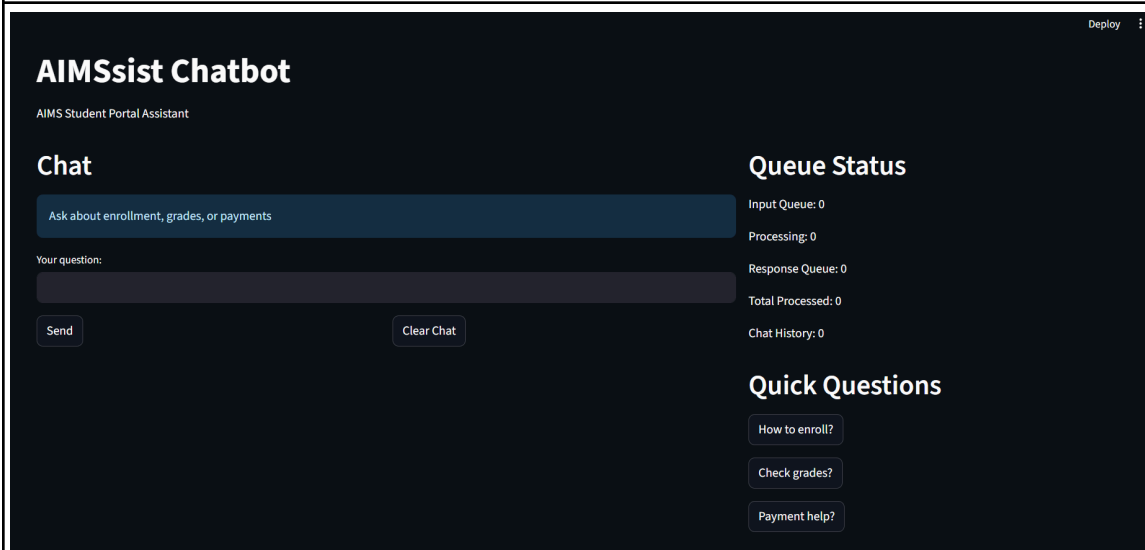


Figure 1. Enhanced Interface

The conversation history bug has been fixed in this latest AIMSsist interface. We also added a clear chat feature as asking many questions makes it look messy. It can be like the users resetting their session as needed with this clear chat feature.

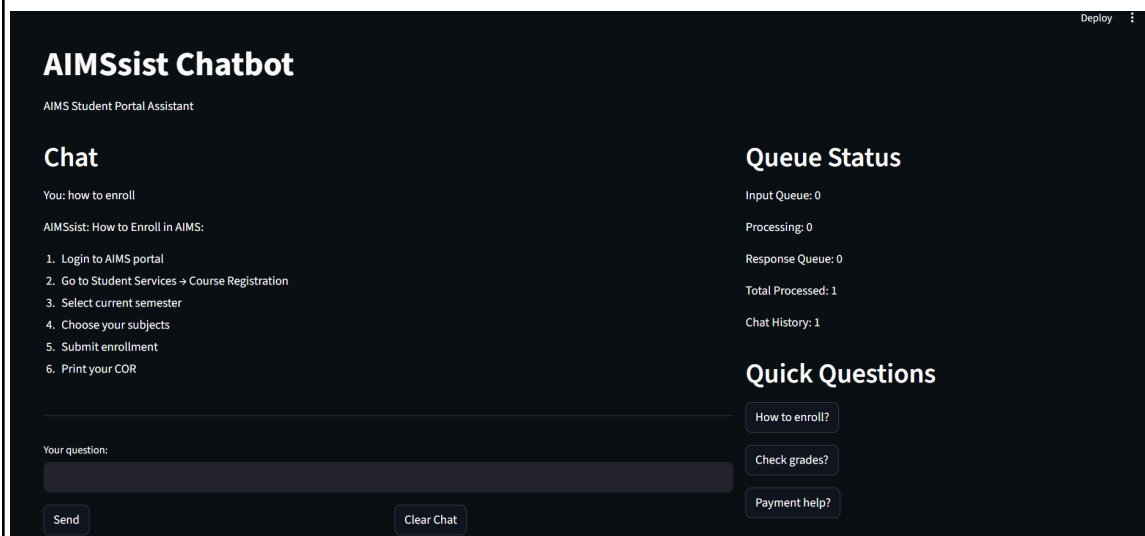


Figure 2. Quick Questions

We renamed the Test Buttons into Quick Questions as resolved the error when clicking this shortcut question button. We made three questions that we could answer at this moment but there's still many improvements needed.

## **6. Conclusion**

In conclusion, this progress report shows minor enhancements to our program called the AIMSsist chatbot and resolved the last issues from the last progress report. Also, we also fixed the history bug, the user messages and the bot responses are handled by the system correctly. Assisting students with regular AIMS activities is provided by the three procedures to the program. The system is now easier to use and understand thanks to the user interface enhancements like the clear chat button and more test choice. But there is more opportunity for development, this version represents a consistent step forward from the last progress report and offers further improvements of the program.