



GoldFusion AI

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INTRODUCTION

Florida A&M University is embarking on an innovative project to revolutionize its financial aid process using AI technology. This effort addresses the pressing need to increase accessibility and efficiency in the way student financial aid is distributed. The principal objective is to achieve a 30% reduction in the processing time for financial help, thereby enhancing the speed and efficiency of the current system. Meanwhile, the initiative seeks to achieve a 20% increase in financial assistance award accuracy, guaranteeing a more equitable and accurate distribution of funding. Improving user experience is a crucial part of this project, as it will make the financial assistance application process easier to understand and less stressful for staff and students alike. This artificial intelligence (AI) solution guarantees to greatly enhance the overall quality of financial support services while also streamlining administrative processes at Florida A&M University.

OBJECTIVES

Using artificial intelligence, the financial aid procedure can overcome significant obstacles. It improves accessibility by giving students precise information on available aid alternatives and eligibility requirements, filling in any knowledge gaps. More students are encouraged to apply for help since the system makes complicated application processes simpler and provides individualized guidance. Additionally, it looks for fraud, ensuring that aid is given to qualified recipients and enhancing system integrity. The AI technology also simplifies communication by giving frequent updates on application status and deadlines, reducing stress. Overall, it supports evidence-based policy decisions to better financial aid programs by optimizing resource allocation, enhancing transparency, and increasing accountability.

PROCESSES

Requirement Analysis: Identified essential features such as document upload, aid application assistance, and AI-driven query resolution.

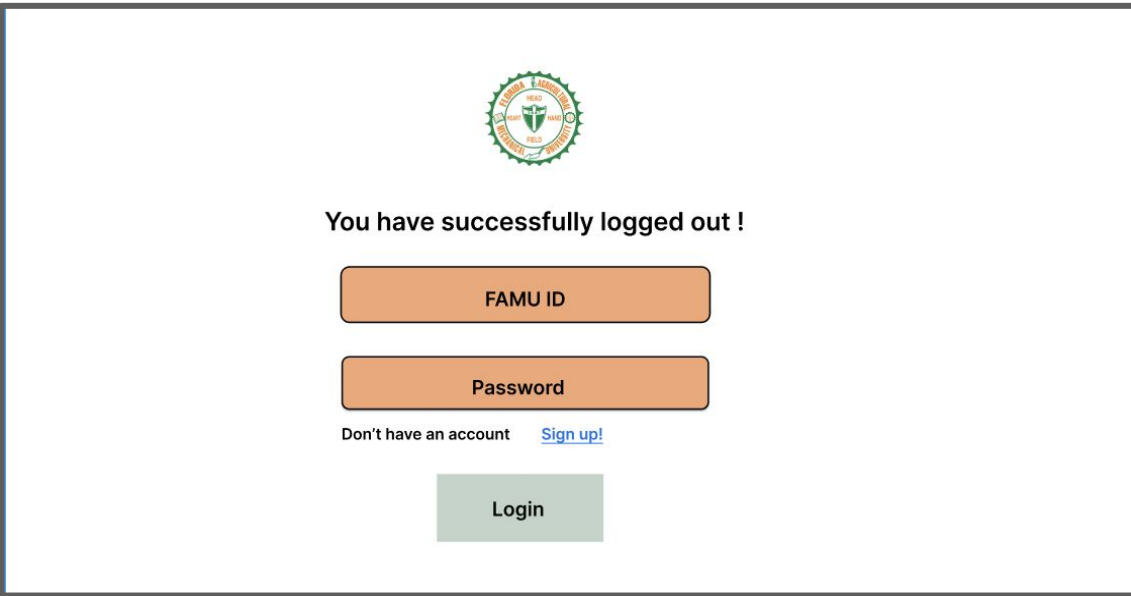
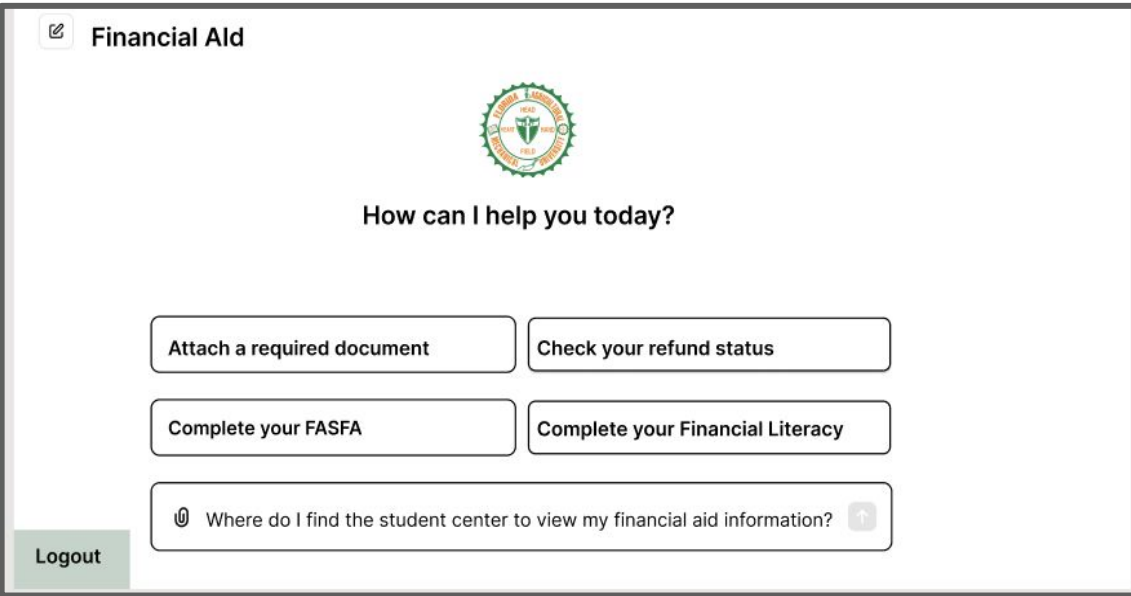
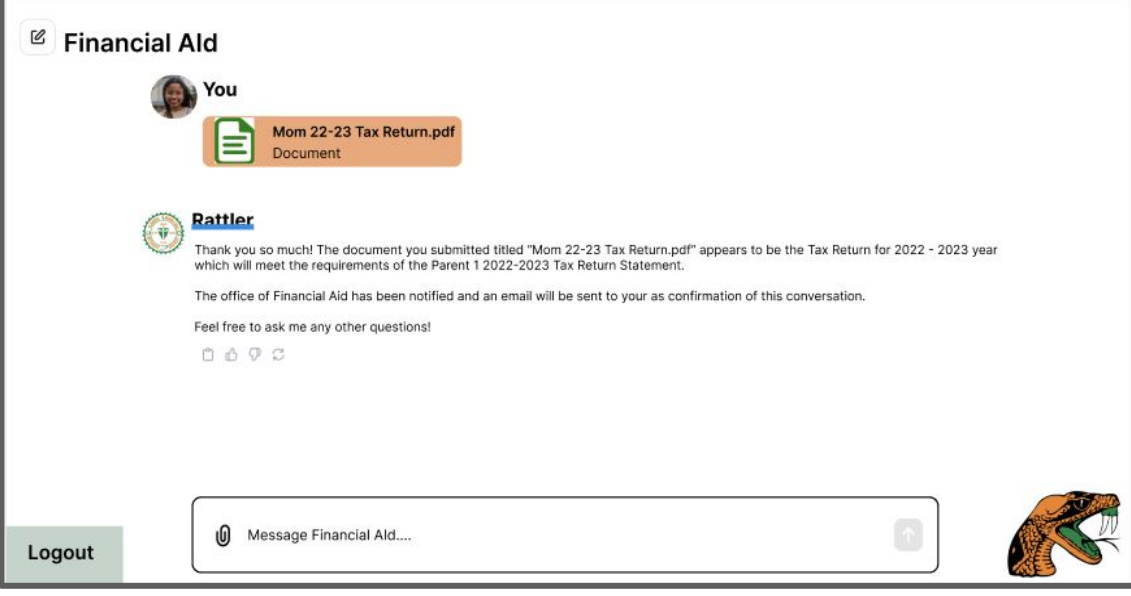
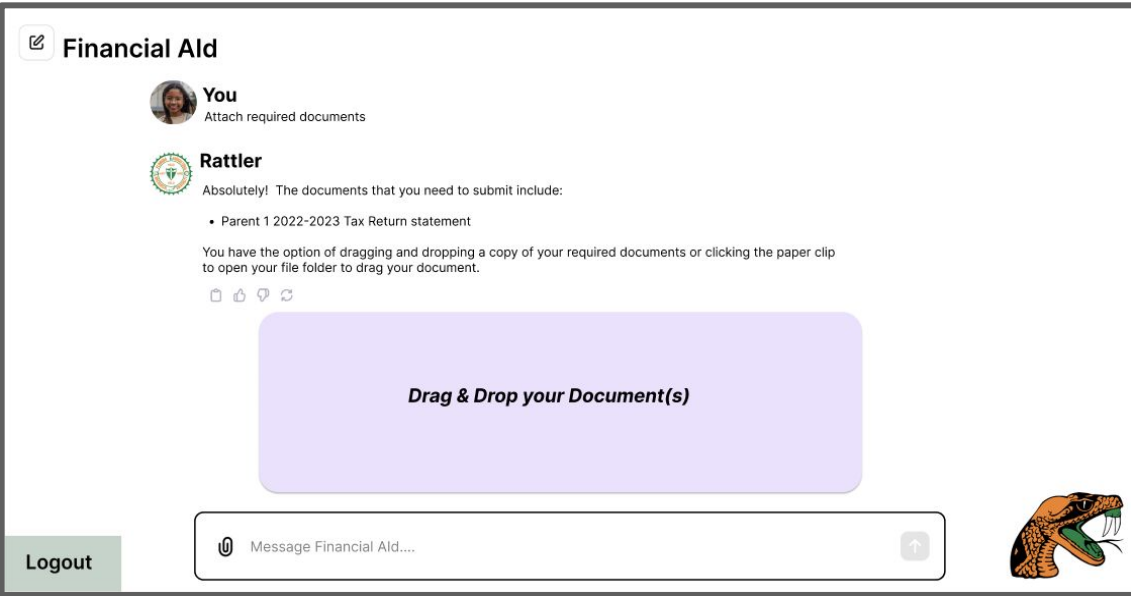
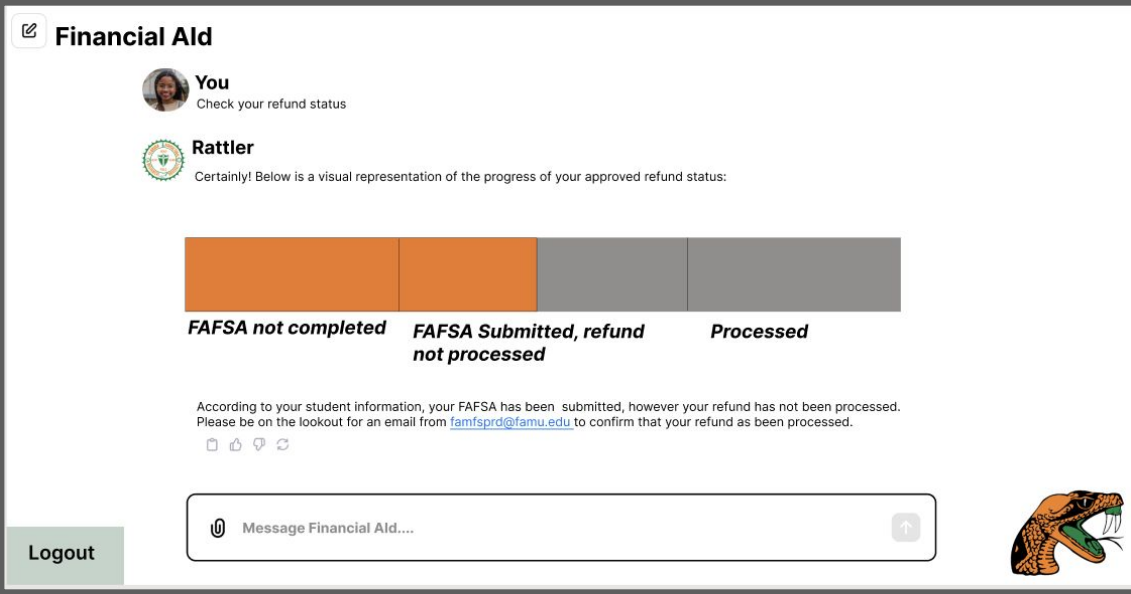
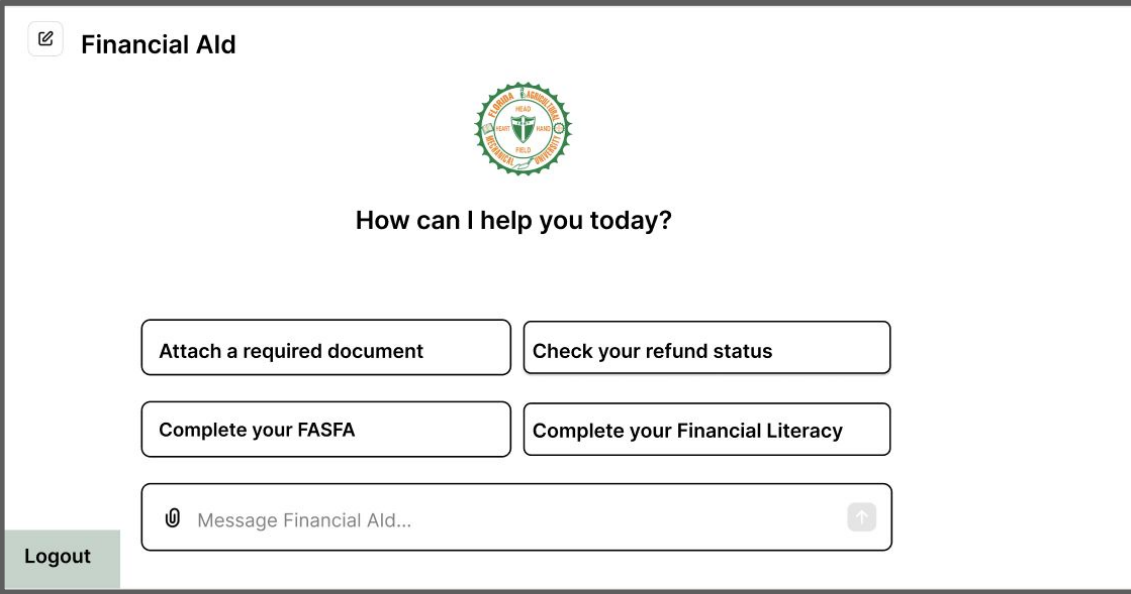
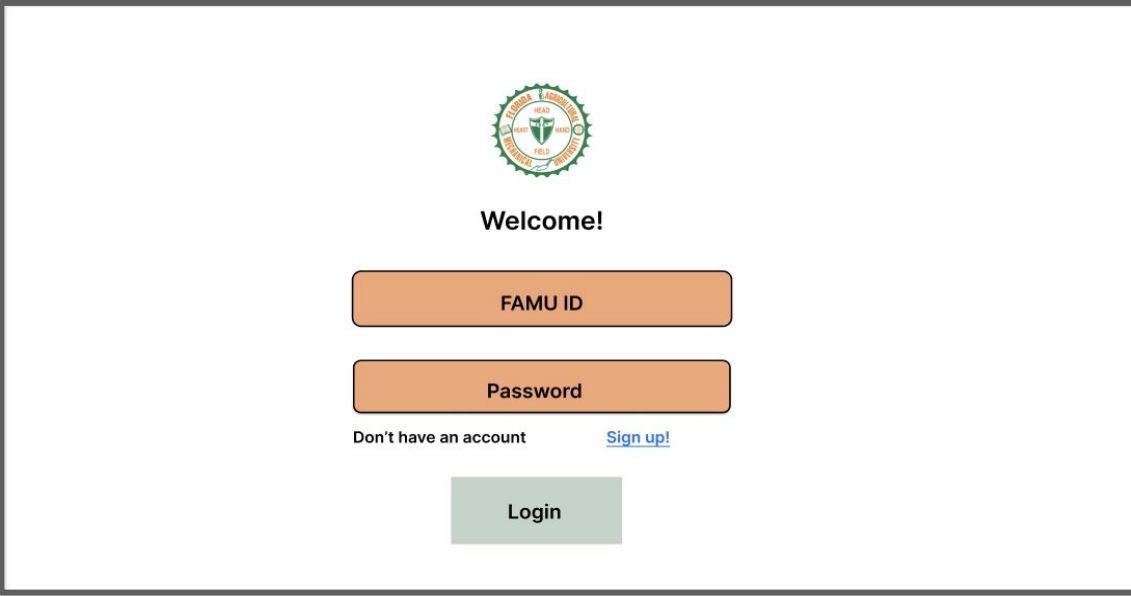
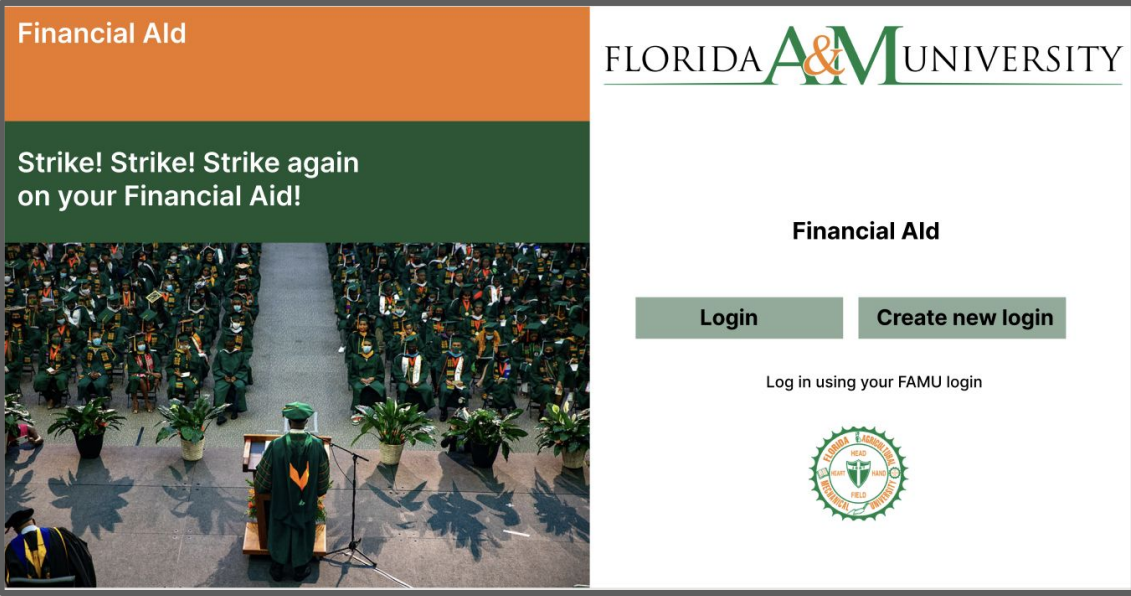
Prototyping: Developed interactive prototypes emphasizing conversational interfaces akin to ChatGPT.

User-Centric Design: Ensured the interface was intuitive, with clear call-to-action buttons and real-time AI interaction points. Focused on implementing FAMU colors and photos to encourage school spirit. The goal was to create a seamless, conversational user experience reflective of ChatGPT's capabilities, focused on ease and accessibility.

Design patterns used include:

- Model-View-Controller (MVC): This pattern could be used to separate the application into three main components: the model (data), the view (user interface), and the controller (business logic), to simplify maintenance and scalability.
- Command Pattern: Actions like 'Attach a required document' or 'Check your refund status' might be implemented using this pattern, encapsulating a request as an object, thereby allowing parameterization of clients with queues, requests, and operations.

WIREFRAME



TECHNOLOGY

1. Natural Language Processing (NLP) API: APIs like GPT-3, BERT, or spaCy can be used for understanding and processing user queries and generating human-like responses.
2. User Interface (UI) Integration API: To interact with the system through a user-friendly interface, web-based or mobile app APIs may be used.
3. Database and Storage API: To store and retrieve user data, including profiles and financial aid history.
4. Authentication and Authorization API: For user authentication and ensuring data privacy and security.
5. Financial Aid Data API: This API would connect to the financial aid database to access information about available aid programs, eligibility criteria, and application deadlines.
6. Personalization API: To tailor the user experience by understanding user preferences and needs.
7. Communication and Notification APIs: To send alerts and notifications to users about deadlines, application status, and updates.
8. Payment Processing API: For processing financial aid disbursements and payments to users.
9. Knowledge Base API: To provide access to a knowledge base or FAQ section for common questions and guidance.
10. Document Management API: For users to upload and share necessary financial documents securely.
11. Reporting and Analytics API: To generate insights and reports about the financial aid process and system performance.
12. Integration with Educational Institutions' Systems: To access and exchange data with the college's student information system and financial aid management system.
13. Chatbot API: To enable chatbot functionality for interactive conversations with users.
14. OCR (Optical Character Recognition) API: To extract information from scanned or uploaded documents like tax forms, ID cards, and other relevant documents.
15. Document Verification API: To validate the authenticity of documents and information provided by users.
16. CRM (Customer Relationship Management) API: To manage interactions and communication with users effectively.
17. Data Analytics and Machine Learning APIs: To analyze and make data-driven decisions, such as identifying trends in financial aid applications and predicting potential issues.
18. Geolocation API: To provide location-specific information and resources related to financial aid programs and resources.
19. Payment Gateway API: To facilitate financial transactions and disbursements securely.
20. Video Conferencing API: For offering video support and assistance to users who need more personalized help.

CONCLUSION

In the culmination of this project, we have envisioned and brought to life an innovative solution at the intersection of technology and compassion — our AI-powered financial aid system. This project represents more than just a technological advancement; it embodies our commitment to addressing real-world challenges and making a meaningful difference in the lives of individuals facing financial hurdles. Our AI-powered financial aid system stands as a testament to the potential of artificial intelligence to revolutionize how we approach complex problems. By seamlessly integrating with various APIs and services, our system has evolved beyond conventional methodologies, offering a dynamic and personalized approach to financial assistance. This project signifies our dedication to harnessing technology for the greater good, ensuring that the benefits of innovation are felt by those who need it the most. Together, we are shaping a future where advanced technology catalyzes positive change, fostering a world where financial assistance is not just accessible but tailored to the unique needs of each individual. This project is more than a system; it's a step towards a more inclusive and compassionate future.