LeaseVault

Senior Design Team Contract

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Intent

The following contract was written and agreed upon by Aidan Place, Faisal Bance, Rishi Vinukonda, and Tyler Moss. The contract provides expectations, objectives, and results for developing LeaseVault.

The contract is effective for all team members participating in the Senior Design Capstone class series in the 2025-2026 academic year.

Senior Design Contract

Project Summary

We are developing an AI-powered application, named LeaseVault, that helps users on the client side to securely store, manage, and understand rental and lease agreements. This tool uses cybersecurity practices with natural language processing to simplify complex rental documents. Users will be able to upload their lease into a secure vault, where the system provides bullet point summaries that highlight key terms and responsibilities. The goal is to give tenants, such as college students and young adults, both security and clarity in understanding their rental agreements.

Problem Statement

Rental and lease agreements are often written in complex legal language, which makes them difficult for some young adults and college students to understand. As highlighted in articles like “How to read a rental contract” from Ashline Jules, a renter is “legally responsible for knowing and understanding what is in your lease.” This lack of experience with contracts can lead young renters to overlook hidden or important clauses and responsibilities that could result in unexpected fees or costly consequences. Additionally, securely storing and managing sensitive documents is a big challenge, with privacy and data protection being critical concerns. As stated by sources from “Why Secure Document Storage Is Important for Your Business” these legal documents contain private information, like bank details and personal information, that must be protected from loss or unauthorized access. Our project addresses these issues by creating a secure platform where users can store and understand their rental agreements using encryption, access control, and AI-powered summarization.

Solution

Our solution is an AI-powered web application that provides secure storage and document summarization. Key features will include:

- A secure vault for uploading and storing rental/lease agreements.
- User authentication so only the owner can access their vault.
- Document hashing to detect tampering or modifications.
- AI summarization of uploaded documents into clear bullet points.
- User-friendly interface for uploading and reviewing documents.

The plan is to use tools like Python, OpenAI’s language models, and web technologies to ensure the tool is scalable, secure, and easy to use.

While some might ask why not use ChatGPT to read over the lease instead of using LeaseVault. ChatGPT collects their user's information entered in the AI in addition to this since they are collecting this information, they can sell it to third parties which can give an unknown amount of people access to private information. The biggest point is ChatGPT is not trained to accurately read these kinds of documents the AI made by LeaseVault will be trained to exclusively read these documents and in addition information from these documents will be secured to the vault with hashing to secure the information as much as humanly possible.

Contact Information

Team Member	Degree + Track Track N/A for BSCyber	Email	Phone Number OR Other Contact Info
Aidan Place	BSIT – Software Development	placean@mail.uc.edu	440-344-9963
Faisal Bance	BSIT - Cybersecurity	bancefl@mail.uc.edu	513-614-0856
Rishi Vinukonda	BSIT - Cybersecurity	vinukorr@mail.uc.edu	502-749-6125
Tyler Moss	BSIT – Cybersecurity and Networking Systems	mosstp@mail.uc.edu	440-668-4288

Project Source

The idea evolved from the team's shared interest in legal technology and cybersecurity. The team originally focused on simplifying legal contracts, initiated by Aidan. However, the project was pivoted to specialize in rental and lease agreements and to create a vault for secure documents, allowing the team to narrow the scope and help an audience that we can relate to. This direction was chosen after our advisor's feedback to ensure cybersecurity is a core design principle, not an add-on, as we had in our original project idea. Requirements were gathered through student and class discussions, online research, and review of similar tools. The team formed during senior design project selection, aligning on both the idea and team dynamics.

Project Objectives/Goals

- Provide a secure vault for rental agreements
- Simplify lease documents through AI-powered summarization
- Ensure encryption, authentication, and data integrity are central to the application
- Help young adults and college students make informed decisions when reviewing leases
- Develop a user-friendly interface accessible via web

Team Members and Responsibilities

- Aidan Place – Front-end Development, UI/UX Design, Documentation
- Faisal Bance – Back-end Development, API Integration, Security Implementation
- Rishi Vinukonda – AI/NLP Model Integration, Cybersecurity Oversight
- Tyler Moss – System Architecture, Security Configuration, Documentation

Project Scope

Our team will develop a functional application that enables users to securely manage and understand lease agreements using the following features:

- Document upload and storage interface
- AI-powered text summarizer and key term explanations
- Secure login and authentication system
- Tamper detection through document hashing

To meet the timeline, the scope will be limited to:

- Only rental/lease agreements
- English language documents only
- Summarization and clarity support, not legal advice

Quick Project Timeline

Task #	Task Name	Duration	Start Date	End Date
1	Requirements Gathering	2 weeks	09/01/2025	09/14/2025
2	Research & Model Selection	3 weeks	09/15/2025	10/05/2025
3	UI/UX Design & Wireframes + Usability Testing	3 weeks	10/06/2025	10/26/2025
4	Backend Setup & API Development + Unit Testing	3 weeks	10/27/2025	11/16/2025
5	AI/NLP Integration (summarization) + Testing	3 weeks	11/17/2025	12/07/2025
6	Security Implementation (encryption, authentication, HTTPS, hashing) + Security Testing	3 weeks	12/08/2025	12/28/2025
7	Frontend Development (user interface + vault features) + Frontend Testing	4 weeks	01/05/2025	02/01/2026
8	Midpoint Testing & Advisor Feedback (prototype)	2 weeks	02/02/2026	02/15/2026
9	Full Integration (backend + AI + security + frontend) + System Testing	3 weeks	02/16/2026	03/08/2025
10	Testing, Iteration & Improvements (bug fixes, user testing, improvements)	3 weeks	03/09/2026	03/29/2026
11	Final Deployment, Documentation & Demo	3 weeks	03/30/2026	04/19/2026

Technologies Used

- Programming Languages:
  - Python (backend, API endpoints, document processing, AI, and security)
  - JavaScript (frontend via React.js, user interaction, uploads, display summaries)
- Libraries & Tools:
  - Flask (backend framework, document upload/processing, user accounts/authentication)
  - OpenAI API (AI summarization)
  - React.js (frontend interface, uploading documents, display summaries, managing user accounts)
- Cloud & Hosting:
  - AWS (Hosts web app and stores documents)
- Data Format Support:
  - PDF, DOCX, TXT
- Security:
  - AES Encryption, HTTPS, OAuth2.0, Input Sanitization, Document Hashing

Ethical Considerations

This project aims to simplify legal language for young adults and college students who deal with lease and rental documents. Since this application will interact with sensitive and complex legal content, it's important to address the ethical considerations with its development and implementation. Some of the main ethical concerns include the risk of misinformation or accuracy, fairness, data privacy, and accountability (Clio). Accuracy is a big issue when using AI in the legal field. If the application provides incorrect or misleading information, users may misinterpret it and potentially lead to mistrust or ill-informed decisions. Fairness is another concern, as the algorithms used in the app will be trained on existing data, which can introduce bias in the outcomes. Furthermore, data privacy is important as many legal documents contain personal and sensitive information and users will expect that their data is securely handled and kept confidential. Lastly, accountability is essential because if the application presents inaccurate information, the team must take responsibility and make it clear to users that this tool is meant to assist in understanding legal documents and not to replace legal professionals. Users should be encouraged to verify information and consult with a lawyer when needed (Clio).

To address these concerns, the team will clearly state that the tool does not provide legal advice, implement safeguards such as data encryption and anonymization to protect user privacy, use diverse datasets to train and evaluate the model to reduce bias, and follow the ACM Code of Ethics to ensure fairness and clarity throughout the development process (ACM Code of Ethics and Professional Conduct, 2018).

Team Rules

1. Plagiarism will not be tolerated, and any violations will face university policies in addition the team will hold a meeting to address the issue and discuss further action.
2. Each member must stay on track with tasks. If a conflict affects a deadline, they must notify the team at least 24 hours in advance.
3. Team members will make an effort to attend meetings, and any absences must be communicated in advance.
4. Team members will communicate their task progress regularly and respond to messages within 24-36 hours to ensure the project stays on track and prevent delays.
5. If conflicts arise, they should be addressed promptly and professionally. Team members will work together to resolve disagreements and if needed, the issue may be escalated to the instructor.
6. All team members will treat each other with respect. Discrimination, bullying, or inappropriate behavior will not be tolerated.
7. A high standard of professionalism, quality, and organization is expected in all aspects of the project and documentation.

Team Signatures:

Signature: _____Faisal Bance_____ Signature: _____Tyler Moss_____

Date: _____9/13/2025_____ Date: _____9/11/2025_____

Signature: _____Aidan Place_____ Signature: __Rishi Vinukonda_____

Date: ____9/11/25_____ Date: ____9/14/2025_____

Advisor Signature:

Signature: ____Samuel Bricking_____

Date: ___9/22/25_____

References

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