Legal Contract Simplification with LLMs

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Goal: Use AI to simplify complex legal jargon for everyone.

Introduction: The Problem & Solution

Problem

Legal contracts are complex and difficult for most people to understand.

Statistics

73% of people find legal terms confusing and overwhelming.

Solution

Apply Large Language Models to translate contracts into plain language.

Objective: Clarity and Accessibility
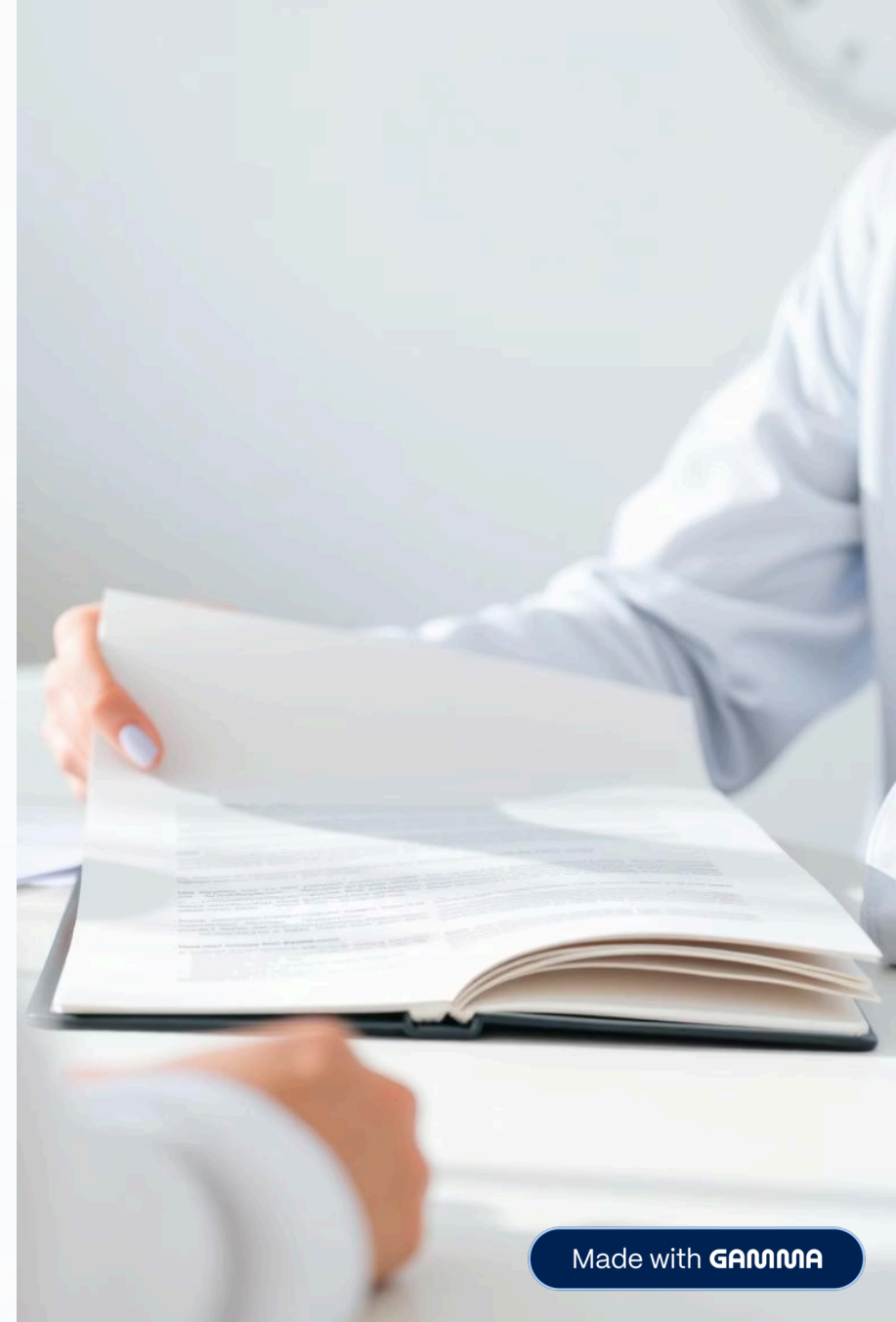
1 **Primary Goal**

Make legal contracts accessible to everyone by simplifying language.

2 **Metric**

Reduce contract reading time by 50% through simplification.

3 **Secondary Goal**

Minimize misunderstandings and legal risks from confusing terms.

Tools & Technology: The AI Stack

Language Model

GPT-3.5 Turbo fine-tuned on legal text for precise simplification.

Programming

Python 3.9 uses libraries: Transformers, NLTK, Gensim, Streamlit.

Cloud Platform

Hosted on AWS EC2 for scalable and reliable processing power.

How the Simplification Works

Load Contract

Import contract document for processing.

Clause Splitting

Break the document into smaller clauses.

Simplify Clauses

Each clause is rewritten using the LLM.

Save Output

Export the simplified contract for end-users.

Project Design: From Jargon to Clarity

1 **Input**

Upload complex contracts (PDF, DOCX formats).

2 **Processing**

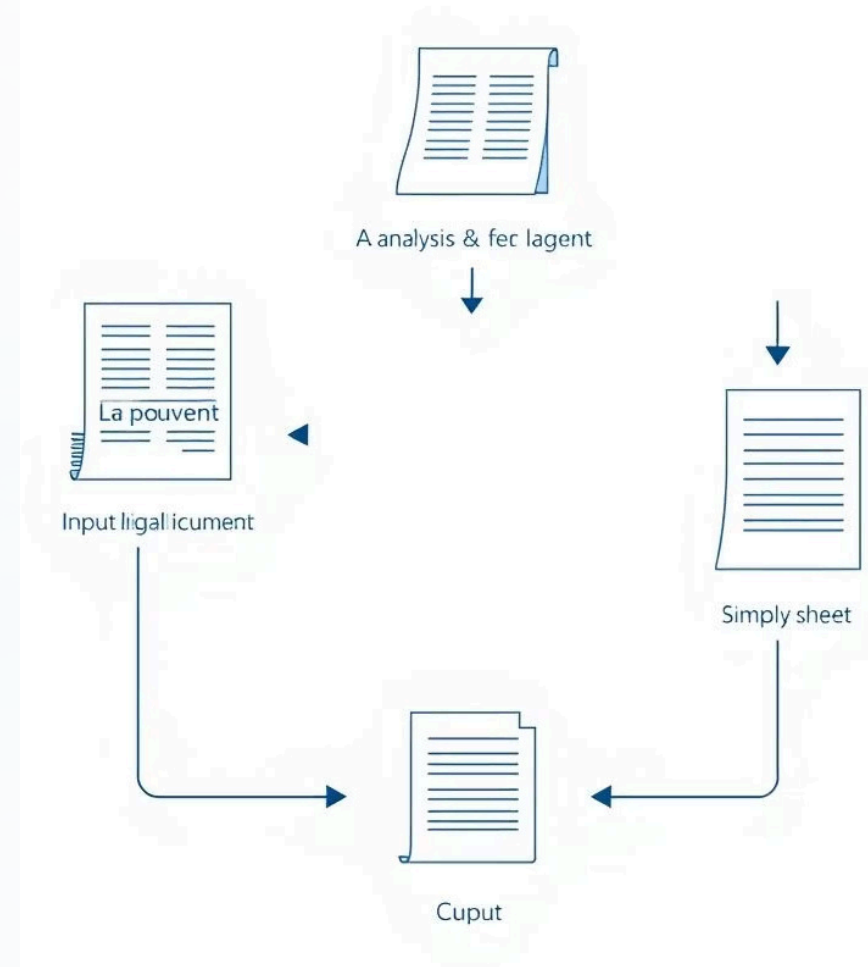LLM analyzes, simplifies, and rewrites legal jargon.

3 **Output**

Generate simplified contract and summary in output files.

4 **Workflow**

Parsing, Summarization, Translation, and Output generation.

Output & Screenshots: Before & After

Original Snippet

Shows complex legal language excerpt.

Simplified Snippet

Plain language version easy to understand.

Side-by-side

Comparison highlights differences clearly.

User Interface

Streamlit app to upload and view simplified contracts.

Conclusion & Future Work

Summary

LLMs significantly simplify legal contracts and improve accessibility.

Impact

Saves user time and reduces misunderstandings in legal documents.

Future Improvements

- Multi-language support
- Higher accuracy
- Integration with legal databases
- Voice input capabilities