



Perry Gabriel

School of Information
University of California, Berkeley

August 6, 2025

Problem Statement

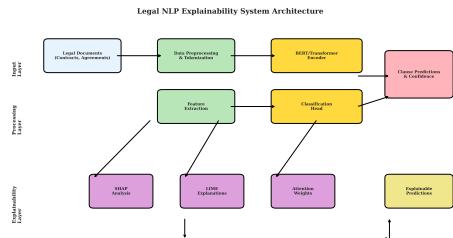
- Legal document analysis is crucial for contract review and compliance
- Traditional manual review is time-consuming and error-prone
- NLP models provide automation but lack interpretability
- Legal professionals need to understand why AI makes decisions

Research Question

How can we develop explainable AI methods for automated legal clause extraction that provide interpretable insights for legal professionals?

Why Explainable AI in Legal Domain?

- **Regulatory compliance** requirements
- **Trust and transparency** for legal professionals
- **Error detection** and model debugging
- **Knowledge discovery** from legal patterns



Objectives:

- 1 Develop a **BERT-based model** for clause extraction
- 2 Implement **multiple explainability methods** (SHAP, LIME, Attention)
- 3 Compare and evaluate **explanation quality**
- 4 Create **interpretable visualizations** for legal professionals

Target Clauses:

- Termination clauses
- Limitation of liability
- Governing law
- Confidentiality provisions
- Payment terms

Thank You

Questions & Discussion

Contact: `pgabriel@berkeley.edu`

Repository: `https://github.com/prgabriel/w266-project-legal-nlp-xai`