



Big Data, AI and Big Law



Latifa Al-Abdulkarim, Ph.D.

Assistant Professor of Computer Science

King Saud University (KSU)

Riyadh, Saudi Arabia

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The Role of Big Data in the Legal Domain

WHY LAW?

Law is at the  of every society

1. The legal profession is one of the most *conservative fields*.
2. Improving *the efficiency* in the legal domain.
3. Supporting the decision making process (*judges the judge who judges wrong*).
4. Making *and interpreting* law, regulations and policies.
5. Limiting *corruption* in Government via automation.

Word of Mouth from World Pioneers



“White color work in the legal world, automating massive amounts of *legal document* (AI in Law)” Andrew Moore, Carnegie Mellon University

World Economic Forum
January 2016 – Davos

“if you are in a car accident in a foreign country, *a robo-lawyer*, with access to all legal data in any city in any language, will come to the rescue.” Michio Kaku, City College of New York



World Government Summit
Febrary 2018 – Dubai

Properties of Data in the Legal Domain



Legal rules have exceptions



Unstructured Data



Reasoning is uncertain



Context-dependent

How Big Data and AI Transform Law and Legal Practice



**Contract
Interpretation**



**Legal Text
processing**



**Legal Reasoning
Logic and
Argumentation**

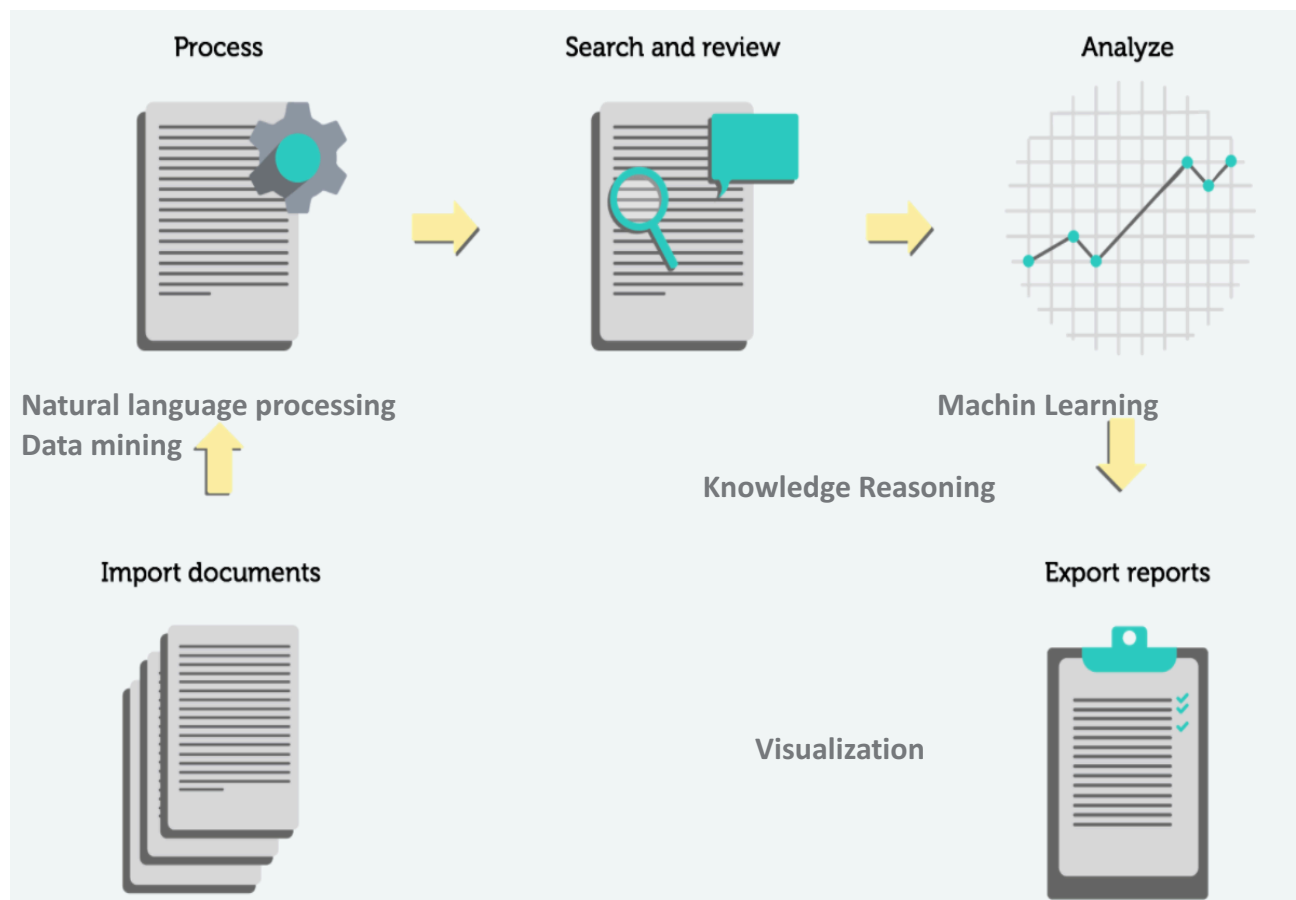


**Case Prediction
and Decision
Analysis**



**Legal
Classification**

Legal Case Analysis and Research tools



Unstructured data:

Oral hearings (audio) and legal case documents.

Purpose:

- Predict case decisions.
- Justify legal argument.
- Classify legal domains.
- Recommend changes in law.

Users:

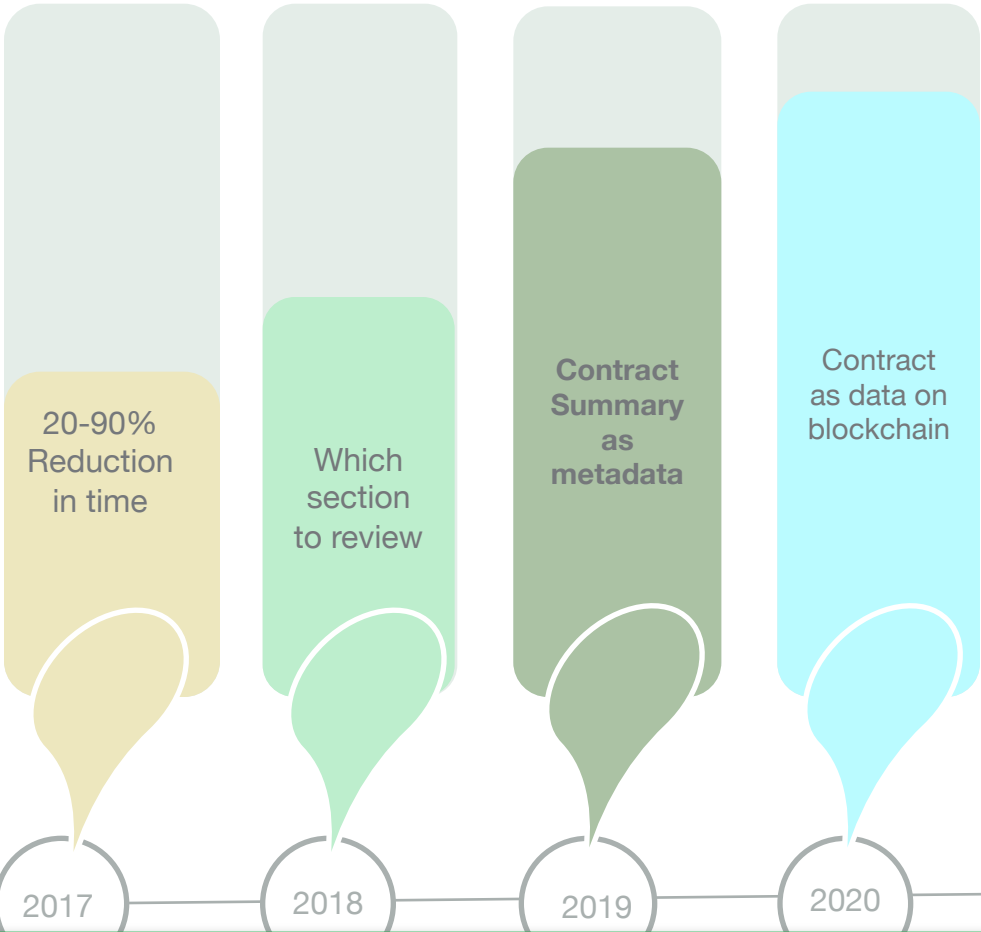
- Governments (Courts)
- Law Firms
- Legal Departments
- Law Students

Contracts Analysis

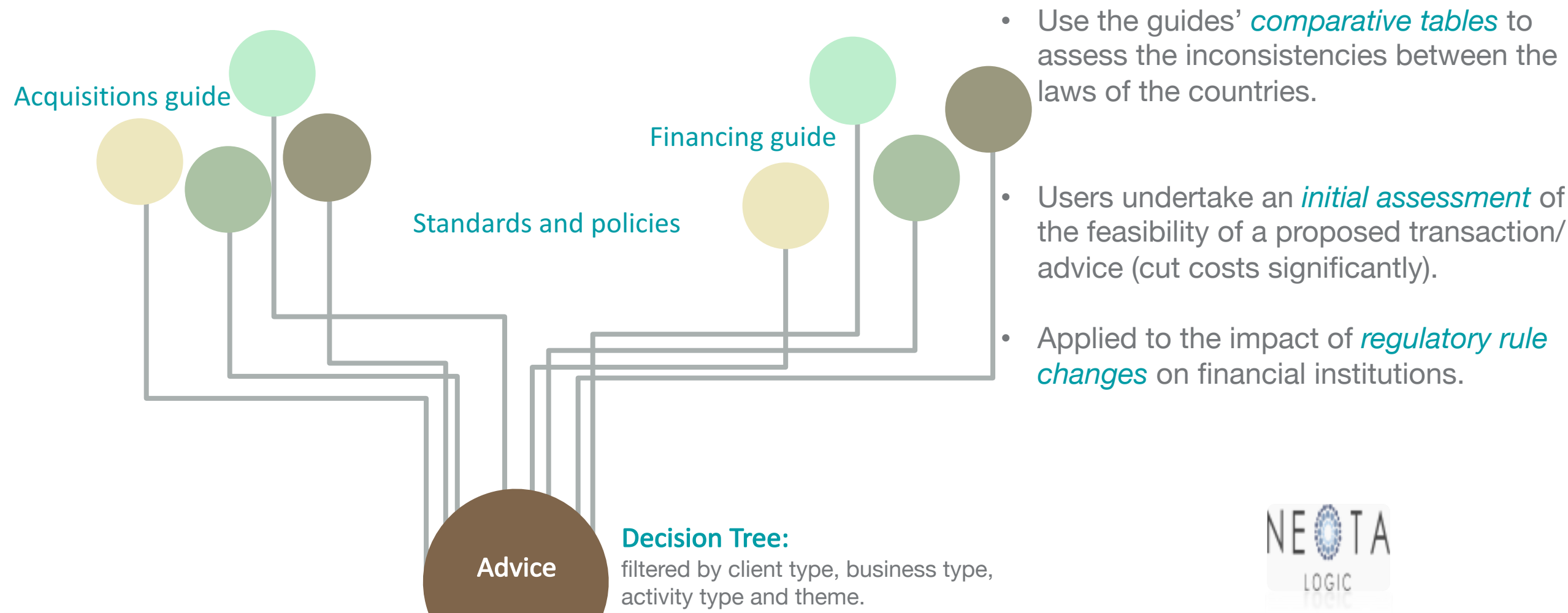
The screenshot shows a web application for contract analysis. On the left is a sidebar with navigation links: Settings, Provisions, Documents, Analysis, Tags, Review Status, Comparisons, and Variations. The main area is titled 'Project TLV' and has a search bar. Below the search bar are tabs for 'By Document' and 'By Provision'. A pagination bar shows '1 to 16 items of 16' and an 'Export' button. The table below lists documents and their associated clause counts.

document	Title	Parties	Date	Term	Assignment	Change of Control	*Control* Definition	*Affiliate* Definition	Governing Law	Force Majeure	Indemnity	Limitation of Liability	Dispute Res.	Exp.
BKCC INVESTMENT MANAGEMENT AG...	1	1	1	1	1	2		1	1	3				
BMTI SUPPLY AGR.pdf	2	1	1	1	1	3	1	1	1	3	4	2		
can supply agt scan.pdf	1	1	1	2	1	1		1	1	2	1	5	1	
CCO bagan emp k.docx	2	1	1	4	1	5		2		1	1	3		
CCO C Davis emp k.docx	1	1		2		1		1		1	1	2		
CCO form emp k.docx	2	1		4	1	5		2		1	1	3		
CCO M Levy emp k.docx	1	1		3	1	3		1		1	1	2		

These systems acquire “knowledge” that can be transferred between matter, and identify contract clauses, regardless of how they are phrased, in any language (Clifford chance report)



Organizations Advice Systems



Big Data, AI and Law Venues



International Association of
AI and Law (**IAAIL**)



Journal of AI and Law



JURIX

The Foundation for Legal Knowledge Based Systems

Academic Conferences



Legal Innovation

Legal Informatics Center:



CODEX
The Stanford Center for Legal Informatics

Legal Solutions Providers:



the answer company

THOMSON REUTERS



Building a better
working world



Cognitive Systems Institute
Group

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Towards AI Governance (Policies and Regulations)

Fairness



- Are we **replicating** human flaws?
- Are algorithms building the **new infrastructure** of *Racism*?

Transparency



How and **why** the system made a particular *decision*?

- **Transparency Standards**

Responsibility



Who is **accountable** in the decision making process:

- **Programmer?**
- **Manufacturer ?**
- **User?**

AI Governance Work



Global AI Governance Workshop



Women Communities in AI



interviews with
prominent women in tech



Bringing all minds together



increase the impact of women
in machine learning

Wrap up

1

Applying AI in the
legal domain
disrupts business
models

2

Features of data
in the legal
domain

3

Take another look
at your data
(Fairness)

4

Vote for
Standards
(Transparency)

Thank you



Questions



IDEAS



lalabdulkarim@ksu.edu.sa



@LatifaMKarim

“Big Data, AI tell you
what the *reality* will
become”