Big Data, AI and Big Law

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The Role of Big Data in the Legal Domain

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.

WHY LAW?
Law is at the heart of every society

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

“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
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

Legal Reasoning
Logic and Argumentation

Contract Interpretation

Case Prediction and Decision Analysis

Legal Text processing

Legal Classification

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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
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)

20-90% Reduction in time

Which section to review

Contract Summary as metadata

Contract as data on blockchain

Evaluation

2017

2018

2019

2020

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Organizations Advice Systems

- Use the guides’ comparative tables to assess the inconsistencies between the laws of the countries.
- Users undertake an initial assessment of the feasibility of a proposed transaction/advice (cut costs significantly).
- Applied to the impact of regulatory rule changes on financial institutions.

Advice

Decision Tree: filtered by client type, business type, activity type and theme.

Acquisitions guide
Financing guide
Standards and policies

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Big Data, AI and Law Venues

International Association of AI and Law (IAAIL)

Journal of AI and Law

Academic Conferences

Legal Innovation

Legal Informatics Center:

Legal Solutions Providers:

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Towards AI Governance (Policies and Regulations)

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<thead>
<tr>
<th>Fairness</th>
<th>Transparency</th>
<th>Responsibility</th>
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<tbody>
<tr>
<td>• Are we <em>replicating</em> human flaws?</td>
<td><strong>How and why</strong> the system made a particular <em>decision</em>?</td>
<td><em>Who is accountable</em> in the decision making process:</td>
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<td>• Are algorithms building the new infrastructure of <em>Racism</em>?</td>
<td>• Transparency Standards</td>
<td>• Programmer?</td>
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<td>• User?</td>
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AI Governance Work

Global AI Governance Workshop
Women Communities in AI

Podcast

The Women in Tech Show

interviews with prominent women in tech

Women in AI

Bringing all minds together

Women in Machine Learning

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)

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Thank you

Questions

IDEAS

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