



AI in Law Studies & Governance for AI

Malcolm Langford

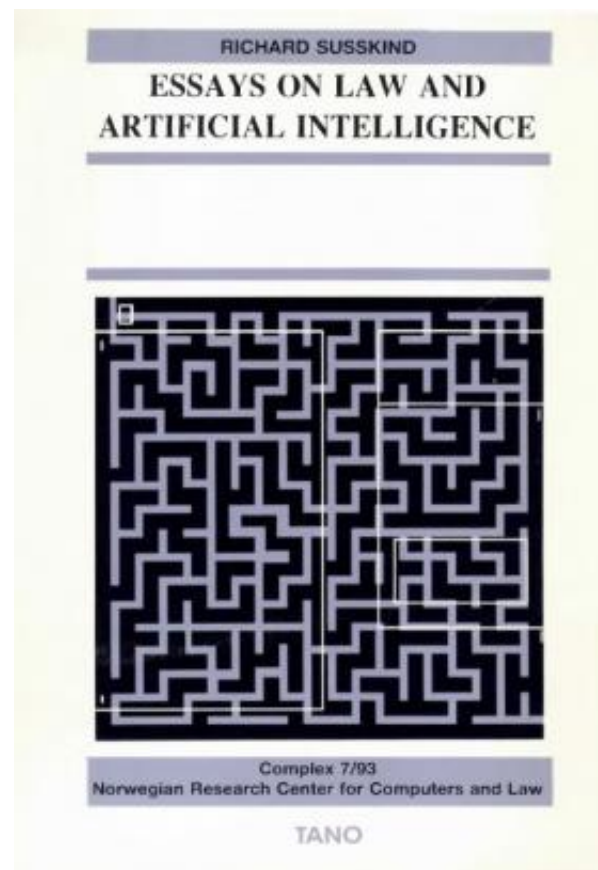
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1. AI in Legal Research



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1. AI in Legal Research



The Computational Turn in International Law

In: [Nordic Journal of International Law](#)

Authors: [Runar Hilleren Lie](#) and [Malcolm Langford](#)

Online Publication Date: 26 Mar 2024

[Abstract](#) [Metadata](#) [Metrics](#)

Abstract

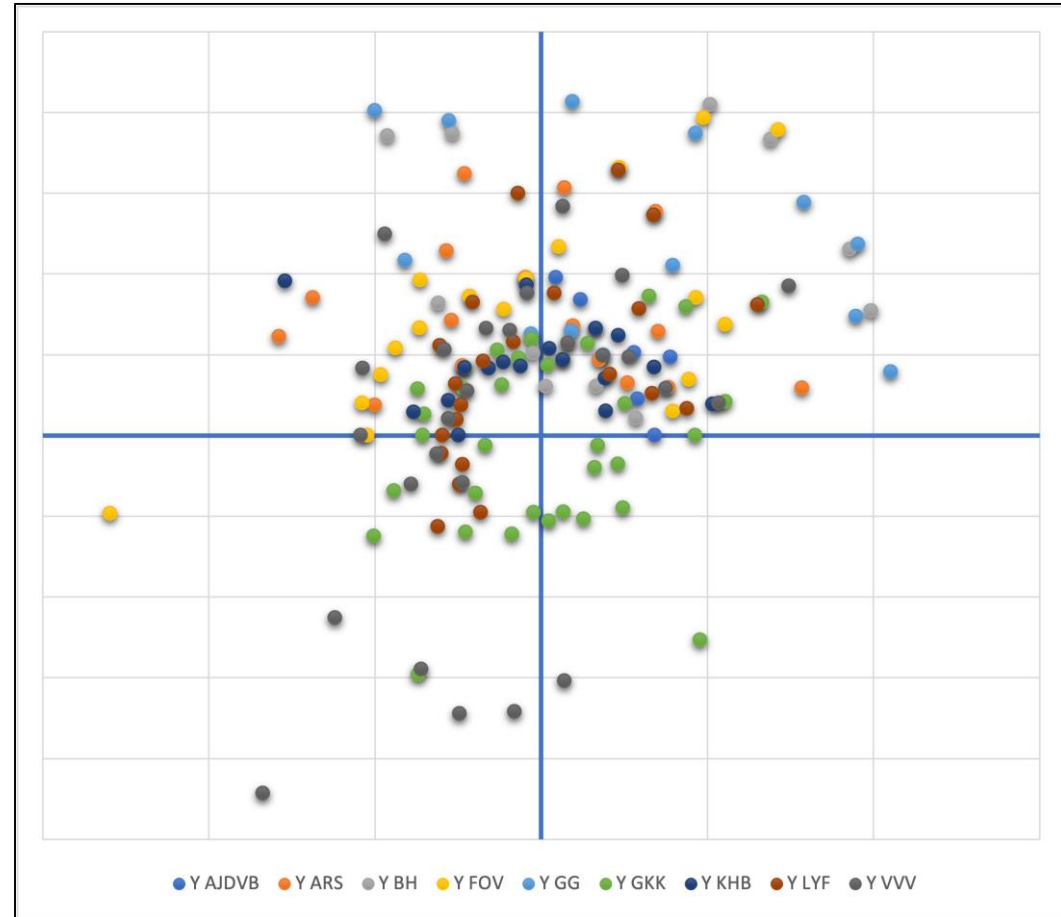
The recent computational turn carries the potential to both enrich and destabilise international law research. Epistemologically, it offers a repertoire of data science methods, including network analysis, text processing and analysis, machine learning, and large language and agent-based models. Ontologically, with its inductive and macroscopic logic, it can inflect and challenge our established understandings of the nature and role of international law. In this article, we review the growing use of computational approaches in international law research, with a focus on their methodological particularity and potential contributions to doctrinal and non-doctrinal research questions. At the same time, we discuss the limitations of the computational turn, especially issues of suitability, quality, and feasibility.

International Investment Law



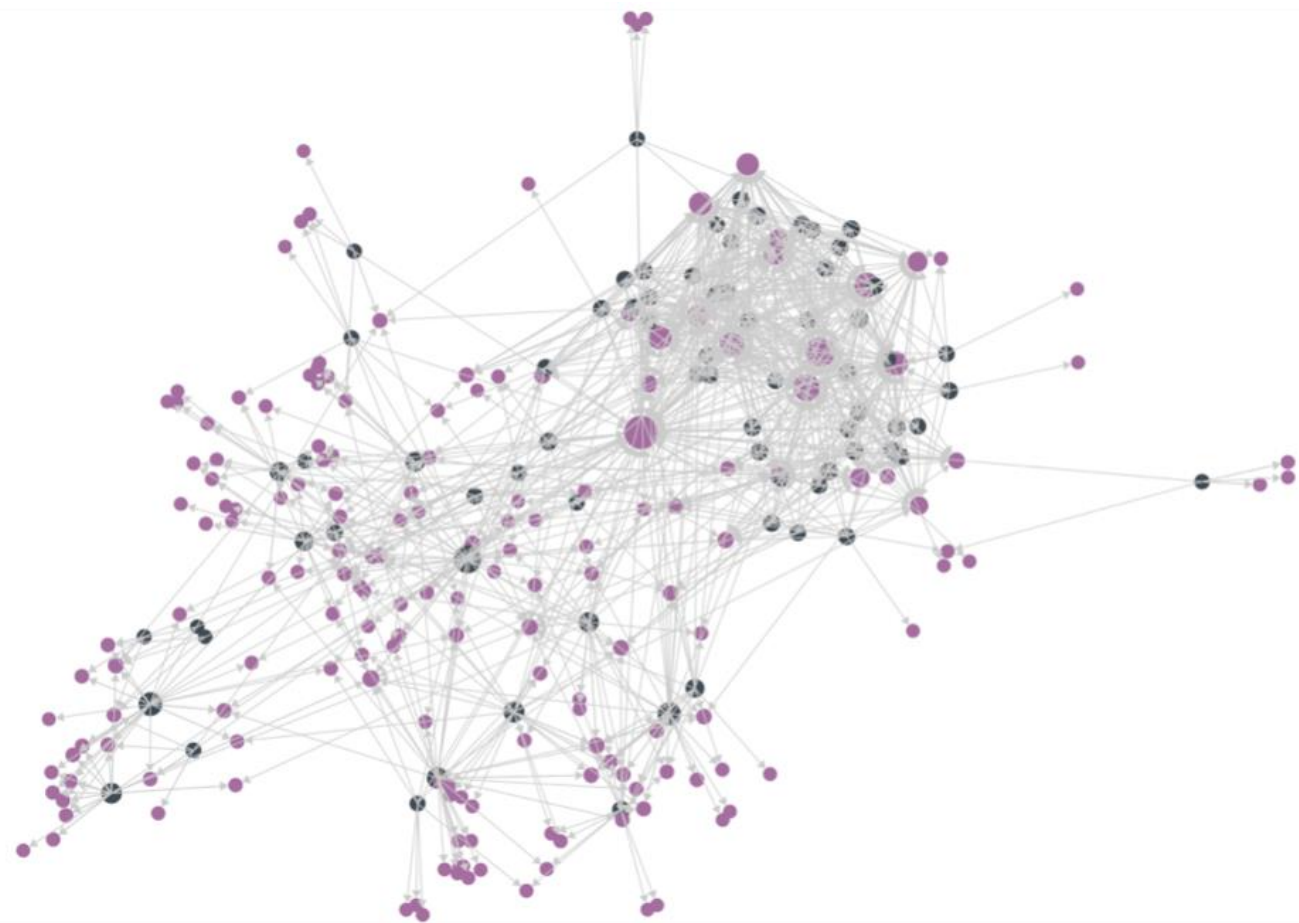
PLURI
COURTS

Predicting authorship of decisions



Langford, Behn and Lie, 'Computational stylometry: predicting the authorship of investment arbitration awards', in R. Whalen, 'Computational Legal Studies: The Promise and Challenge of Data-Driven Research', (Edward Elgar, 2020), 53-76.

Predicting treaty outcomes



INDICATOR	SAMPLE SIZE	% SUCCESSFUL GUESS BASED ON HIGHER VALUE
Machine learning (full knowledge)	NA	96.80%
Machine learning (reduced model)	NA	77.00%
Calculated state influence	40 585	60.39%
States life expectancy	38 024	57.62%
Access to electricity	19 592	56.17%
Military Spending	31 551	55.40%
GDP pr capita	36 276	54.53%
GDP pr captia (PPP)	32 544	54.38%
GDP (rel \$)	36 295	54.13%
GDP (constant \$)	35 164	53.90%
Net FDI	33 105	53.54%
GDP (constant \$ PPP)	31 922	52.53%
FDI net of GDP	31 980	51.14%
Population	38 276	50.47%

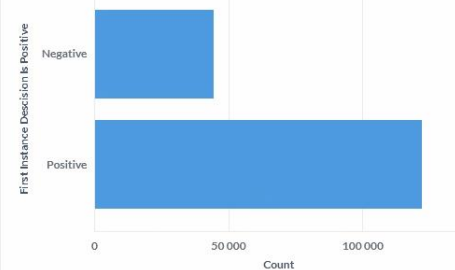
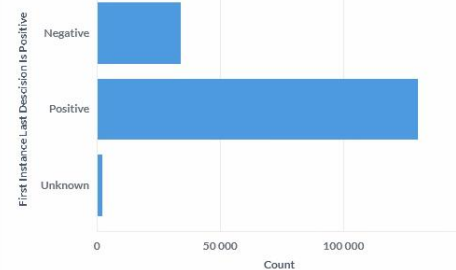
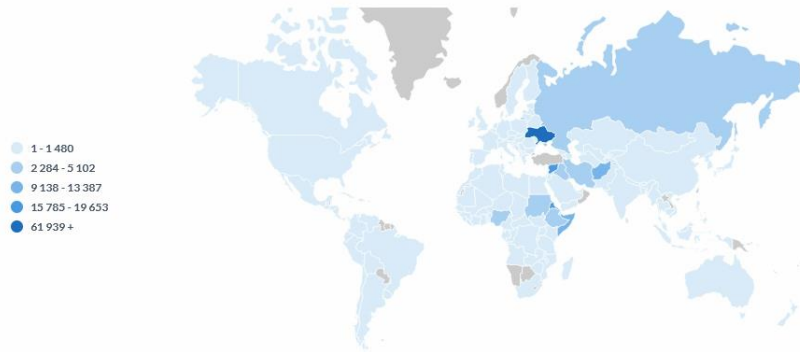
Lie, R. H. (2023). Treaty influencers: a computational analysis of the development of international investment law. *Journal of International Economic Law*, 26(3), 500-524.

Lie, R. H. and Langford, M. (2024). *Fait Accompli: Predicting the Outcomes of Investment Treaty Negotiations*, ICON society of Public Law, Madrid.

S2-Data: Research Infrastructure for Sensitive Social Data



NordASIL: Asylum cases



LEADS

Learning engine for analysis

Oversikt

[Utslag](#)

Dokumenter

[Dokumenttest](#)

Saker

[Saktest](#)

Instillinger

[Instillingsvee](#)

[Verktøy](#)

[Dokumentkategorier](#)

[Hjelp](#)

tesetadf

Choose the task type*

LLM

Choose the LLM that you want to use*

LLAMA

Document category that will be queried by the LLM*

Test category with few documents

Add a new question that you want the LLM to ask the material*

Test

ADD QUESTION

Question?

What is the purpose of everything?

RUN HERE

type*


LEADS

Learning engine for analysis of decisions

Oversikt

- Stats

Dokumenter

- DocumentText

Saker

- CaseList

Instillinger

- Settings
- Workflow
- DocumentWorkflow
- Tool

ADDAKI - Konvertittsaker - 1951 cases in selection

Phrases included in this search*

Add a new phrase to the search*

Text

ADD PHRASE

Phrases*

Jens Støtchenberg
Eino Selberg
Gunnar Ott
Ungtidskole
Paletting

Document categories that will be searched*

+

Name*	Description*
Bekreftede vedtak	Semikategori for bekreftede vedtak
Arbeidsutstilling og lytte	Dokumenter knyttet arbeidsutstilling og lytte
Intern vurderinger	Dokumenter som representerte interne vurderinger

RUN SELECTION

N = 160 000 /
4 million

The CLEANUP Project

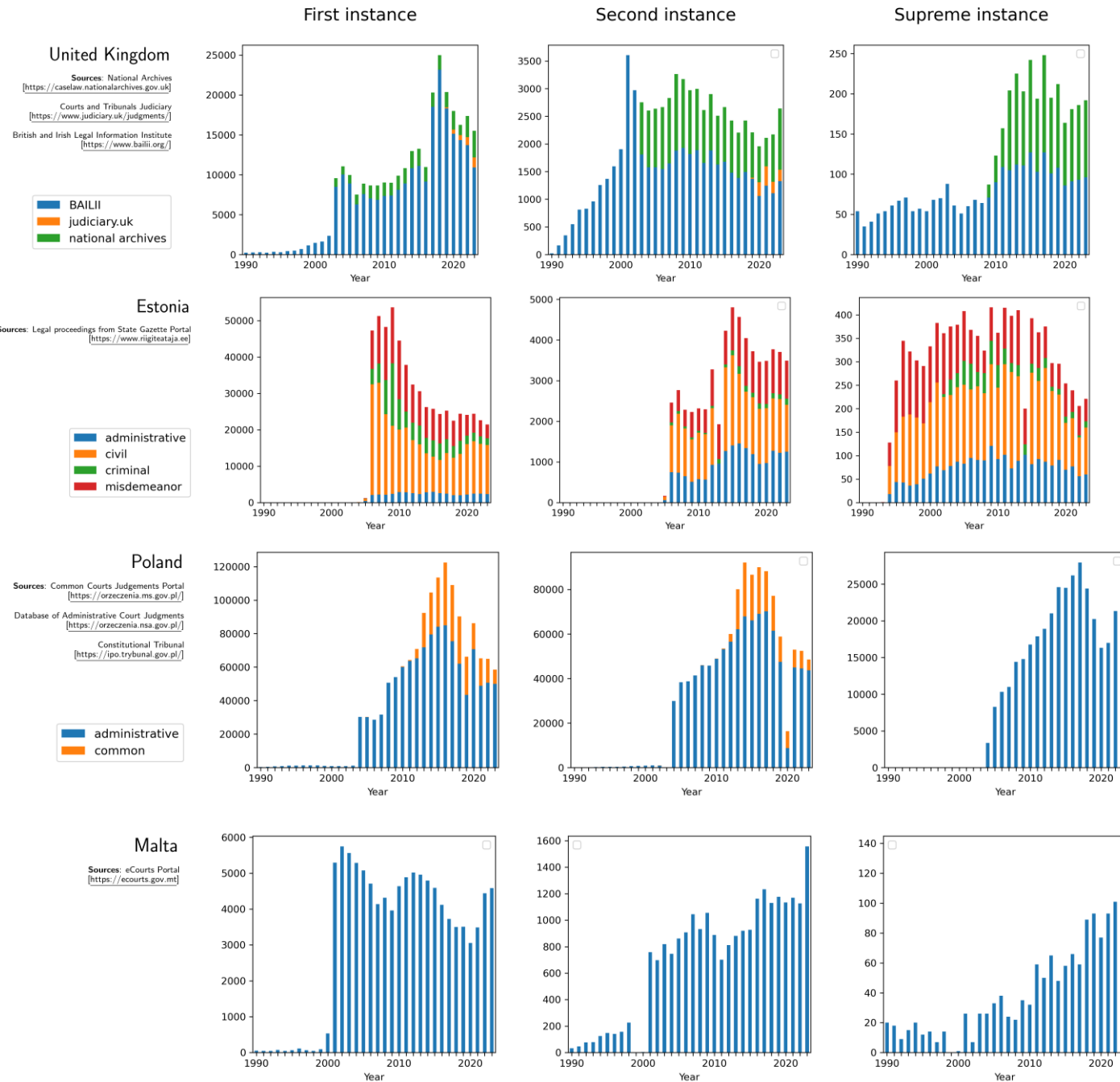


Anonymisation & Judgments

- **Techniques to anonymise, including judgments**
 - Pilán, I., Lison, P, Øvrelid, L., Papadopoulou, A., Sánchez, D. & Batet, M. (2022) [The Text Anonymization Benchmark \(TAB\): A Dedicated Corpus and Evaluation Framework for Text Anonymization](#). *Computational Linguistics*, 48(4): 1053-1101.
 - Manzanares-Salor, B., Sánchez, D., & Lison, P. (2024). [Evaluating the disclosure risk of anonymized documents via a machine learning-based re-identification attack](#). *Data Mining and Knowledge Discovery*, 1–36.
- **Can automatisation tools satisfy GDPR requirements?**
 - Weitzenboeck, E., Lison, P., Cyndecka, M. & Langford, M. (2022) [GDPR and unstructured data: is anonymization possible?](#) *International Data Privacy Law*, 12(3).



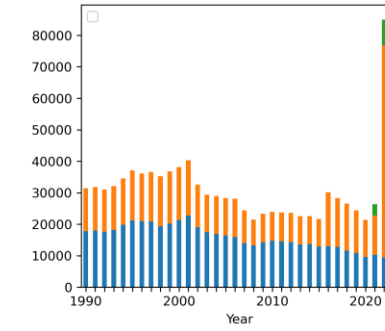
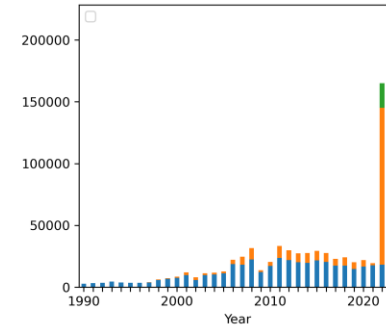
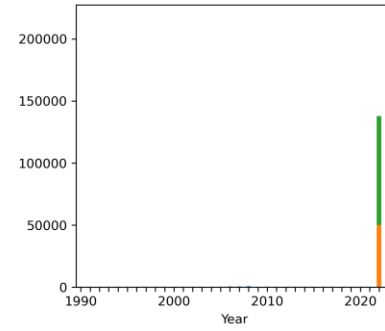
Number of court cases published at selected online sources,
divided by country and instance level.



France

Sources: Légifrance
[<https://www.legifrance.gouv.fr>]
Database of Judiciary Decisions Judilibre
[<https://www.courdecassation.fr/acces-rapide-judilibre>]
Open Database of Administrative Decisions
[<https://opendata.justice-administrative.fr>]

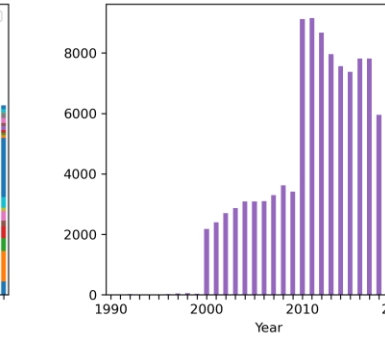
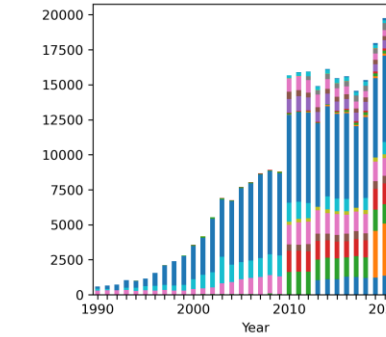
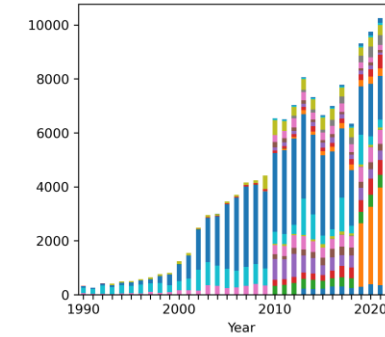
■ Légifrance
■ judilibre
■ opendata



Germany

Sources: Judgments published by both federal and state courts on the search portals listed on
<https://justiz.de/onlinedienste/rechtsprechung/index.php>

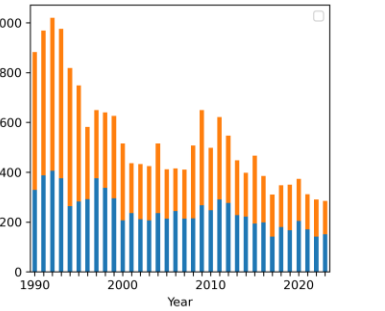
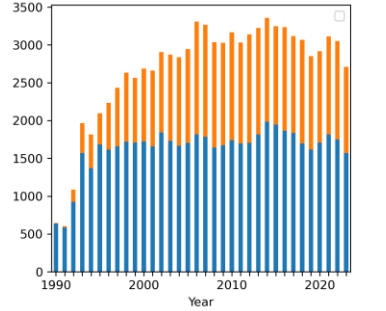
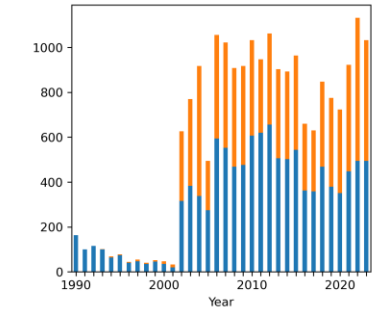
■ Baden-Württemberg
■ Bayern
■ Berlin
■ Brandenburg
■ Bund
■ Hamburg
■ Hessen
■ LAG Bremen
■ Mecklenburg-Vorpom.
■ Niedersachsen
■ Nordrhein-Westfalen
■ OLG Bremen
■ OLG Dresden
■ OVG Bremen
■ Rheinland-Pfalz
■ Saarland
■ Sachsen-Anhalt
■ Schleswig-Holstein
■ Sächsisches OVG
■ Thüringen
■ VG Bremen



Norway

Sources: Lovdata Pro Database
[<https://lovdata.no/pro>]

■ civil
■ criminal

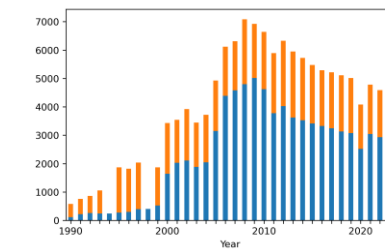


Number of decisions published by the European Court of Human Rights and the Court of Justice of the European Union

ECtHR

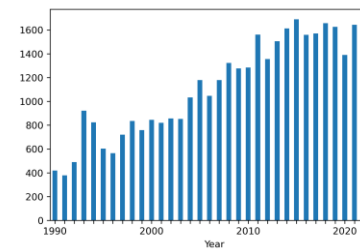
Sources: HUDOC Database
[<https://hudoc.echr.coe.int>]

■ judgments
■ decisions



CJEU

Sources: CURIA Database
[<https://curia.europa.eu/juris>]



Open Justice Data in Europe: A Patchwork

26 Pages • Posted: 28 Apr 2025 • Last revised: 4 May 2025

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Date Written: April 07, 2025

Abstract

The publication of court judgments has been long viewed as essential to upholding rule of law and democratic norms. In recent years, there has been also a demand for online publication. This would enhance public access, improve the quality of legal research, and help facilitate new legal technologies. However, across the European continent, many states have struggled to transition to online publication at scale. In this article, we ask therefore three questions: what are the obligations of states to publish judgments; which states are making progress and why; and what are the challenges and solutions in ensuring greater publicity? To answer these questions, we examine the overarching duties in the European Convention on Human Rights and EU law and the relevant legal requirements and practice in 12 national jurisdictions and two regional courts. Our findings show tremendous variation in both duties and practice, and we identify a series of barriers to progress (legal, organisational, and budgetary) but also promising and replicable innovative solutions in select jurisdictions. The paper concludes that while this publication diversity provides a useful form of experimental governance, it would be timely to move towards common standards and approaches.

Keywords: Legal information, Online publication of judgments, Data privacy, Access to justice, Open data licences, Legal technology, Artificial intelligence, Access to information, Judicial accountability

Licensing of Reuse of Judgments: Analysis of Selected European Jurisdictions

Fostering transparency of judicial decisions
and enhancing the national implementation
of the European Convention on Human
Rights



	Strong Duty	Weak Duty
Strong practice	ECtHR Estonia France Croatia	Malta CJEU England/Wales
Weak practice	Italy Czech Republic Poland Germany	Ireland Norway Sweden

2. AI in Legal Education

UNIVERSITETET
I OSLO

Det juridiske fakultet

CELL: Centre on Experiential Legal Learning

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Vi arbeider for å utvide erfaringsbasert læring i en digital tidsalder.
Vårt mål er å skape fremtidens jurist. [Les mer om CELL.](#)



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[← Studies](#) [← Courses](#)

JUS5671 - Legal
Technology:
Artificial
Intelligence and
Law

- Learning outcomes
- Undervisningsmateriale

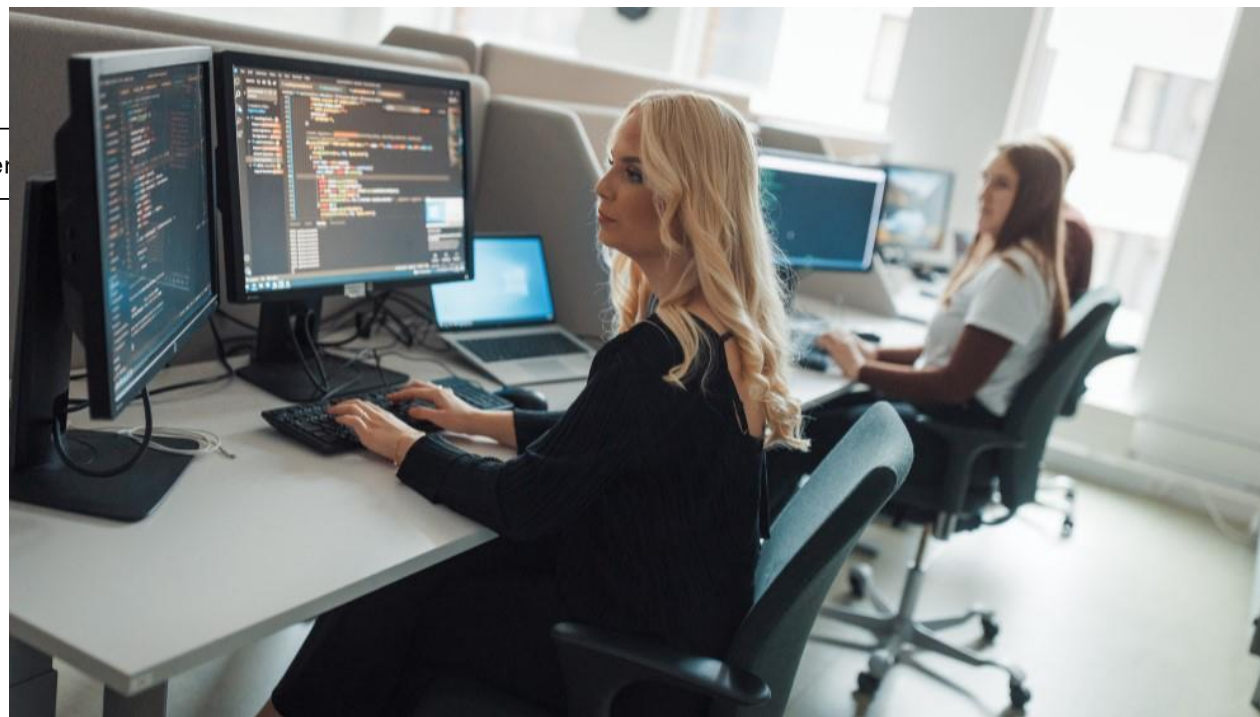
Level: Master **Credits:** 10

Teaching: Every spring **Examination:** Every

JUS5671 – Legal Technology: Artificial Intelligence and Law

Course description

- [Course content](#)
- [Learning outcome](#)
- [Admission](#)
- [Prerequisites](#)





← Studies ← Courses

JUS5080

- Learning outcomes

JUS5080 – Programming for Lawyers

Level: Master **Credits:** 10

Teaching: Every autumn **Examination:** Every autumn **Teaching language:** English

Course description

→ Course content

→ Learning outcome

→ Admission

→ Prerequisites

→ Overlapping courses

→ Teaching

→ Examination

→ Evaluation

[← Studies](#) [← Courses](#)

JUS5690

- Learning outcomes

JUS5690 – Robot Regulation

Level: Master **Credits:** 10

Teaching: Every spring **Examination:** Every spring **Teaching language:** English

Course description

- Course content
- Learning outcome
- Admission
- Prerequisites
- Overlapping courses
- Teaching
- Examination
- Evaluation



Auto response to practise exams

- Student uploads their practice exam
- The system uses an LLM to answer the teachers YES/NO questions
- If the system answers no, a predefined text by the teacher is sent to the student.

SmartReview

Feedbacks

Oppgaver

Prompttemplate

Schemas

Oppgaver

Jus3211 - Avtalerett H2023

Main

Generell informasjon

Oppgavetittel

Fakultetsoppgave

Fag

Jus3211 - Avtalerett

Semester

☐ Vår

☒ Høst

År

2023

Antall underoppgaver

Velg antall underoppgaver som skal vurderes separat.

Spørsmål

Spørsmål til alle underoppgaver

Domsoppslag: RT-1999-1933

Forarbeidsoppslag: Ot.prp. nr. 49 (2004-2005)

Domsoppslag: Rt-1932-222

Åpent spørsmål: objektivt ansvar

Lovoppslagger: Straffeloven

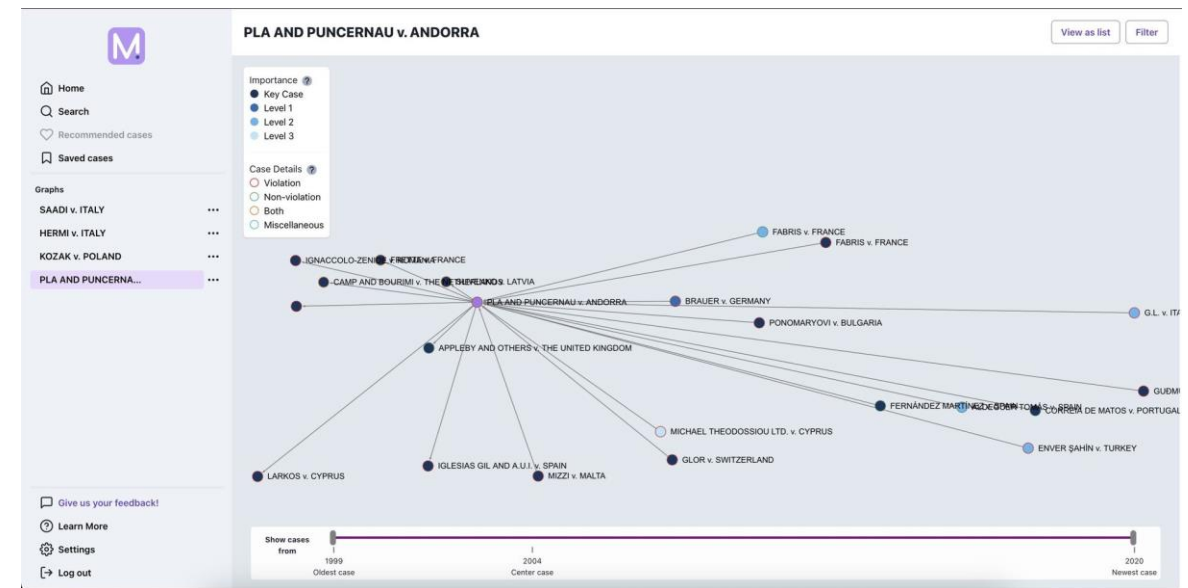
Åpent spørsmål: rettsregelen for objektivt ansvar

Forhåndsdefinerte spørsmål: Søk etter lange setninger(spacy)

Domsoppslag: RT-2014-282

Åpent spørsmål: straffereduksjon

MESHR Learning Tool



TeamLearn Analytics

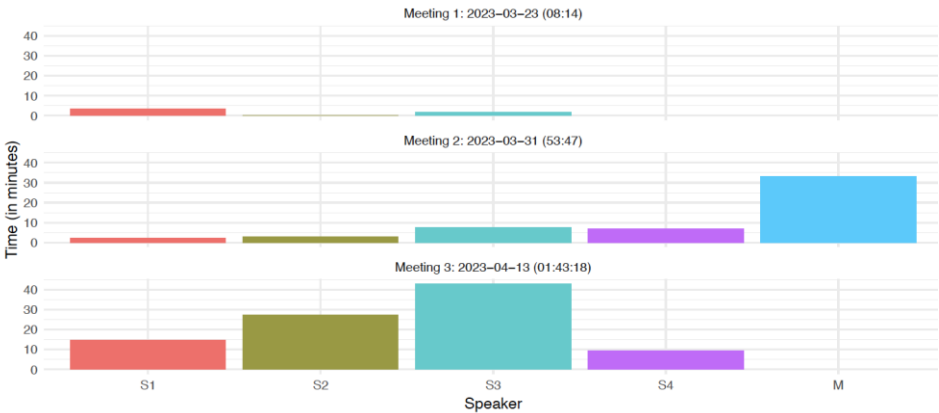


Total speaking time by student



Speaker S1 S2 S3 S4

Speaking time by meeting



Speaker S1 S2 S3 S4 M



Chats

	Messages	Reactions	Men
Student1	63	10	
Student2	28	2	
Student3	14	6	
Student4	36	4	
Group total	141	22	

3. Governance of AI: Research & Policy



Large Projects

DigiReg

Digital Regulation (DigiReg) er eit normativt prosjekt som har som mål å utvikle og forbedre rettsstaten gjennom digitalisering av lova.



DigiVel The Digital Welfare State

The welfare state is changing rapidly. As new tasks emerge to be solved and demands for efficiency increase, new digital solutions are being developed. Digitization creates many new legal questions and provokes new perspectives to longstanding issues. Through the Digital Welfare State project, we seek to contribute new knowledge through long-term research, innovative teaching and dialogue with public authorities.



VIROS Vulnerability in the Robot Society

Duration: 02.01.2019–30.09.2026

The increasing deployment of robots and artificial intelligence (AI) systems is introducing new layers of critical infrastructures in various areas of our society. This, in turn, contributes to new digital vulnerabilities and poses novel legal and regulatory questions.



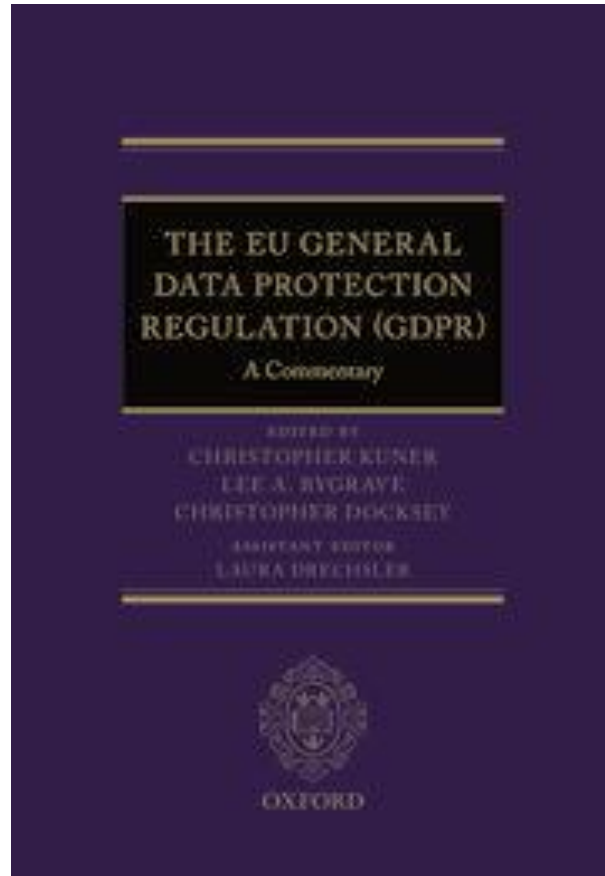
Digital DNA

Forensic Scientist examining hair with DNA evidences. iStock/SandraMatic.

Duration: 01.08.2021–28.02.2027

How does DNA evidence change when it is integrated with digital technologies?
What happens to digital technologies when they are integrated with biology?
This project examines how big genome data changes law enforcement practices as well as computing.

GDPR & AI Act & Human Rights & Domain Areas



Læring, hvor ble det av deg i alt mylderet?

Bruk av elev- og studentdata for å fremme læring



HOME / ARCHIVES / VOL. 11 NO. 2 (2024): VOLUME 11, ISSUE 2 / Practical Reports

Implementing Learning Analytics in Norway

Four Central Dilemmas

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JOURNAL OF LEARNING ANALYTICS

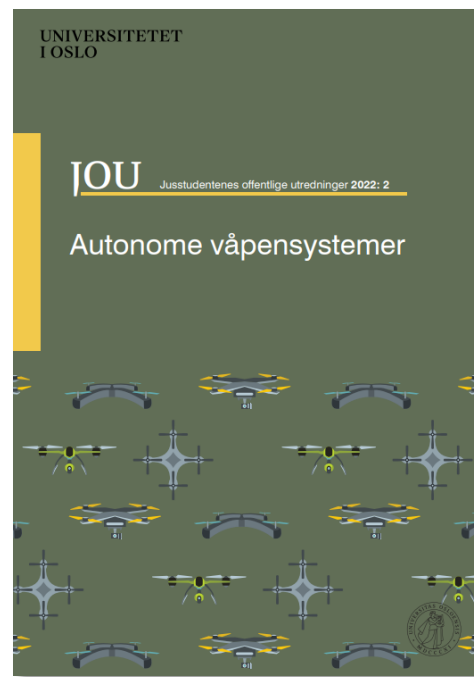
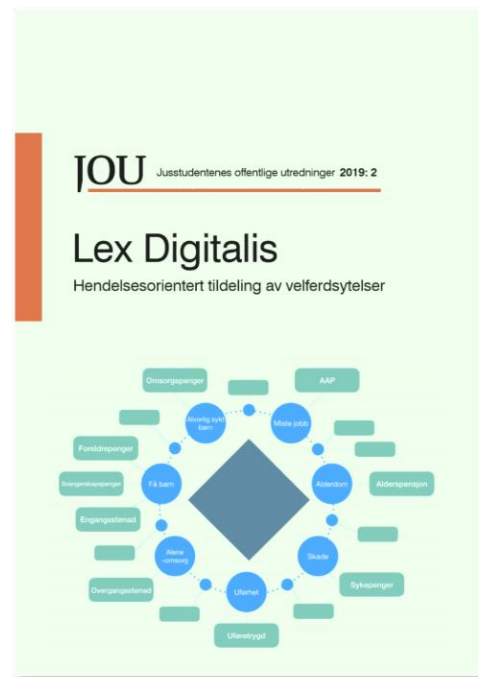
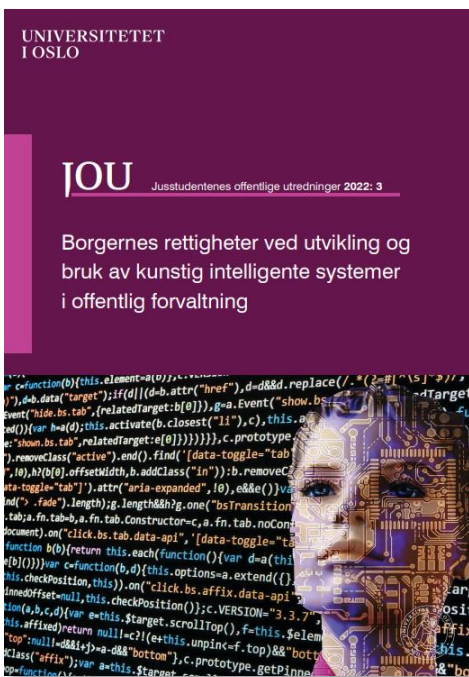
Volume 11 - Issue 2

SOLAR
SOCIETY for LEARNING
ANALYTICS RESEARCH

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2024-07-25



LOVLAB



AI for Governance of AI

Legata - A domain language for maritime regulatory compliance

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Abstract

The paper addresses the challenge of ensuring that increasingly powerful autonomous maritime vessels operate safely and conform to regulatory standards. We present Legata, a domain language designed to ensure regulatory compliance in autonomous maritime vessels. By leveraging large-scale simulations, Legata translates legal regulations into computable terms, enabling precise evaluation of vessel behavior across diverse scenarios. The framework quantifies risk based on regulatory violations, providing a structured method for assessing compliance. A case study on the Istanbul Strait demonstrates Legata's practical application.

CCS Concepts

• Computing methodologies → Simulation environments;
Simulation languages.

Keywords

AI & Law, Safety Assurance, Autonomous Vessels, Risk Evaluation, Maritime Regulations

ACM Reference Format:

Sreekant Sreedharan, Melih Akdağ, Muthu Ramachandran, Erik Røseag, and Børge Rokseth. 2018. Legata - A domain language for maritime regulatory compliance. In *Proceedings of The 4th ACM Symposium on Computer Science and Law (CS&Law '25)*. ACM, New York, NY, USA, 19 pages. <https://doi.org/10.1145/3709025.3712213>

1 Introduction

This paper builds on our recent work, advancing the development of a systematic framework for modeling and verifying the safety of autonomous maritime vessels. In our original paper [34], we argued

that for autonomous vessels to fully replace human operators, they must be evaluated against tests that mirror those applied to human decision-making. We then introduced a platform that leverages large-scale computing to generate a vast array of simulated virtual environments, within which Autonomous Navigation System (ANS) can be tested to observe their behavior across diverse operational contexts. Our core hypothesis is that by exploring a vast, extensive range of situational scenarios, we can uncover the nuanced behaviors of these algorithms with greater precision, allowing for a deeper understanding of their inherent characteristics.



Figure 1: The Strait of Istanbul Source: NASA Earth Observatory.



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<https://doi.org/10.1145/3709025.3712213>

Building on this foundation, the current paper advances the discussion by demonstrating how this simulation platform can be applied to ensure regulatory compliance in autonomous maritime transport. To demonstrate our approach, we used a real-world application focused on navigating the complex and congested waters of the Istanbul Strait.

Thank you

