**A close up of a sign

Description automatically generated**

|  |
| --- |
| **TechLaw**  **HEC Paris**  **MSc International Taxation & Legal Strategy**  **WInter**  **2020-2021** |

**David Restrepo Amariles**

*Associate Professor of Data Law & AI, HEC Paris*

*In collaboration with*

**A picture containing knife

Description automatically generated**

**Julien Sébastien**

*Partner, Allen & Overy LLP*

**Laurie-Anne Ancenys**

*Counsel, Allen & Overy LLP*

**Introduction**

Our society is undergoing one of the most radical transformations of recent times as a consequence of technological innovation and the implementation of tech-based tools in diverse areas of our society and our economy. Legal actors and legal processes are not immune to these transformations. The course of TechLaw at HEC Paris is run in collaboration with Allen & Overy. It explores the technologies underpinning the shift towards computational and data-driven law, such as artificial intelligence, the Internet of Things, smart contracts and distributed ledgers, as well as the legal mechanisms framing them ethics codes and technical standards.

The course provides a hands-on and pragmatic approach to understand the potential and constraints of using technologies in law through a case study conducted in collaboration with Allen & Overy where students will contribute to design legal metrics in the area of corporate governance.

**Objectives**

1. Provide a critical understanding of the key legal, technical, and socio-economic issues at stake with the use of AI and processing of data in the legal domain.
2. Equip students with the skills to frame legal problems into AI tasks and identify the technologies to implement them.
3. Develop pragmatic thinking on the use of technology in law through the design of a methodology to produce legal metrics.

**Teaching Methods**

Students are required to read in advanced the material in the Syllabus and prepare notes for discussion. The course is designed to be discussion-based and case study-based. It will also rely on explanation and questioning, and will have dedicated moments to open brainstorming and creative thinking. The elective comprises 18 hours of hybrid-learning which includes lectures, presentations, discussion, written exercises and case-specific work with academics and professionals.

Students will also get involved in a case study exercise working with an interdisciplinary team. You will engage in the design of legal analytics to automate the extraction of data, processing and representation.

**Student Assessment**

This course intends to develop different skills and competences in students. The variety of assessment methods aims to provide students with a balanced examination. Students will be evaluated on the basis of three criteria.

The case study is worth 100% of the course grade. 50% will consist in the creation of the group’s index (including data collection and a methodological note) and the other 50% will consist in the presentation of the index (including a slide-deck and an oral presentation followed by a Q&A). More instruction are provided in the note for the case study.

**Course Rules**

* Participants are required to attend all class sessions and come prepared to the class.
* Access to the classroom may be refused in case of arriving late
* The use of cell phones and smartphones is not allowed in the classroom.
* Please bring your laptop to each class. I will let you know when you need to turn off your laptop.
* All absences should be notified to the professor by email (and the Program Manager or Academic Affairs)

**PROGRAMME AND READING MATERIAL**

**Session 1 –** **Introductory session: AI and the Law (January 4, 2021, 2.30 PM)**

This session provides a general overview of the technological transformation underway in our society and economy, its instruments, and its effects on legal processes and the legal profession. It includes a guest talk by Dazza Greenwood (MIT Computational Law) and an open discussion with Prof. David Restrepo Amariles. It will flesh out basic notions of computational law (e.g. internet of things, automation and computation, etc.) and technologies supporting digital transformation (data analytics, symbolic AI, machine learning). Based on several examples, we discuss how technology affects the content of legal norms, their life cycle and their enforcement. Finally, we reflect about the role of law-trained professionals in both engineering and framing the use of these multiple technologies. This session includes an introduction to the use of Github.

Compulsory Readings

* David Restrepo Amariles & G. Lewkowicz, Unpacking Smart Law: How Mathematics and Algorithms are Reshaping the Legal Code in the Financial Sector, *Lex Electronica*, vol. 25, n° 3, pp 171-185, 2020. Available at [SSRN](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3754007).
* Alex Pentland, A Perspective on Legal Algorithms, *MIT Computational Law* Report (2019), available [here](https://law.mit.edu/pub/aperspectiveonlegalalgorithms/release/3)

Suggested Reading

* David Restrepo Amariles, Algorithmic decisions systems: Using Automation and Machine Learning in the public administration, in Cambridge *Handbook of Law and Algorithm*s (W. Barfield, ed., Cambridge University Press, forthcoming 2020).
* David Freeman Engstrom, Daniel E. Ho, Catherine M. Sharkey, Mariano-Florentino Cuellar, Government by Algorithm: Artificial Intelligence in Federal Administrative Agencies*, Report Submitted to the Administrative Conference of the United States* (2020)

**Session 2 – Legal Metrics and Analytics For Lawyers (January 5, 2021, 9.00 AM)**

The first part of this session focuses on legal metrics, including indicators, indexes and analytics. It introduces students to the role of social indicators and statistics in law, and discusses the different types of data collection methods, aggregation methodologies and forms of representing the results. Students will have the opportunities to discuss their case study during the class. The second part of the session will provide students with an overview of current technologies used to automate the extraction of data from legal text and generate legal analytics. We will discuss the use of different sorts of algorithms in legal processes to collect and process data, produce analytics, and automatize decision-making in legal contexts. By looking concretely into the process of implementing data mining techniques to a pre-defined dataset, we will explore the phases of data cleansing, pre-processing, formalization, segmentation, legal design, and ontologies, etc.

Compulsory Reading

* David Restrepo Amariles and Julian McLachlan, Legal Indicators in Transnational Law Practice: A Methodological Assessment, 58 (2) Jurimetrics 164 (2018). Available at [SSRN](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3753523)
* Paul Boniol, George Panagopoulos, Christos Xypolopoulos, Rajaa El Ham- dani, David Restrepo Amariles, and Michalis Vazirgiannis. 2020. Performance in the Courtroom: Automated Processing and Visualization of Appeal Court Decisions in France. In Proceedings of the 2020 Natural Legal Language Processing (NLLP) with KDD Workshop, 24 August 2020. Available [here](http://ceur-ws.org/Vol-2645/paper2.pdf)

Suggested Reading

* Erika R. George and David Restrepo Amariles, Ranking for Good? A Comparative Assessment of the Performance of French Corporations in Human Rights Rankings, 53 (1) The International Lawyer 21 (2020). Available at [SSRR](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3753544)
* Sean Cao, Wei Jiang, Baozhong Yang, Alan L. Zhang, How to Talk When A Machine is Listening: Corporate Disclosure in the Age of AI, National Bureau of Economics Working Paper Series (2020)
* [Allen and Overy Global Litigation Survey](https://drive.google.com/file/d/1a3M0IMR382Uusmfj8pgVWSNx4q5GBFLk/view?usp=sharing)

**Session 3 - AI and Ethics – in collaboration with A&O (January 11, 2021, 2.30 PM)**

The first part of this session is dedicated to the presentation of the preliminary results by each group. You will have 5 minutes to present your ideas. The second part outlines the key data ethics challenges that arise in relation to reliance on machine learning systems. We will focus on the issues of bias, discrimination, explainability, transparency and security of algorithms. The second part of this session will focus on how ethics is a growing concern for businesses and regulators across the world (CNIL report on ethical issues, European Commission draft Ethics Guidelines, the National Health Service’s Code of Conduct for responsible data use by its AI partners).

**Session 4 – AI and partnership - in collaboration with A&O (January 12, 2021, 9.00 AM)**

This session addresses the topic of data governance and data monetization. Businesses are increasingly considering how they can harness AI to grow revenues, improve business processes or better exploit their assets, whilst remaining compliant and safe. AI can also be the reason for deals being done. In the last few years, A&O advised at on a number of AI projects, both transactional and advisory in nature, by which clients are seeking either to acquire AI technology and expertise or develop AI capabilities through transformation projects.

**Optional session –MIT Computational Law Course (January 15, 2021, 6.00 -7.00PM)**

**with Dazza Greenwood,** Lecturer and Researcher, MIT Connection Science and MIT Media Lab and Executive Director, [Law.MIT.edu](http://Law.MIT.edu)".

Registration is compulsory [here](https://docs.google.com/forms/d/e/1FAIpQLSeHXAp9vCb0uzvYFpJolI2LlkKJtdCReLI4F1TVJGgicqBxpA/viewform)

Access to Computational Law course material is available [here](https://github.com/mitmedialab/2021-MIT-IAP-Computational-Law-Course)

**Session 5 – AI and Legal advice Law - in collaboration with A&O (January 26, 2021, 9.00 AM)**

This session will focus on the background for providing legal advice under the relevant bar rules and their interaction with technology and AI. There are obvious limits to what formulaic and logical programmes can achieve without a lawyer intervention. The objective would be to identify and address the issues relating to the use of AI in providing legal advice including through attorney-client privilege and legal opinions.

Suggested Reading

* Andy Neill, What’s Artificial About Ethical AI In The Legal Industry? Everything, [*Above the law blog*](https://abovethelaw.com/legal-innovation-center/2018/10/25/whats-artificial-about-ethical-ai-in-the-legal-industry-everything/?rf=1).
* Janine Cerny Steve Delchin Huu Nguyen, Legal Ethics in the Use of Arftificial Intelligence, [Squirepattonboggs](https://www.squirepattonboggs.com/-/media/files/insights/publications/2019/02/legal-ethics-in-the-use-of-artificial-intelligence/legalethics_feb2019.pdf)

**Session 6 – Regulatory Frameworks for AI Law (January 28, 2021, 9.00 AM)**

This session looks into the multiple regulatory initiatives from the public and private sector to frame the use of AI. More particularly, it sketches out the risk approach and the sociological background supporting most of current approaches to AI regulation. It also highlights generally strategies to hold algorithms accountable from an IT (auditing, statistic and dynamic testing, circuit breakers, scalability, etc.) and managerial perspective (ethics codes, CSR, etc.). The second, part of this session is dedicated to a Q&A related to the case study. Students can test their final hypothesis and discuss with the course instructor the preparatory work for the presentation of the results.

Suggested Reading

* Joseph, M., Kearns, M., Morgenstern, J., Neel, S., & Roth, A., Fair Algorithms for Infinite and Contextual Bandits, [arXiv:1610.09559](https://arxiv.org/abs/1610.09559)
* Berk Ustun, Alexander Spangher, Yang Liu, Actionable Recourse in Linear Classification, [arXiv:1809.06514](https://arxiv.org/abs/1809.06514)