

## Tutorial Outline of Law for Computer Scientists

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This tutorial will provide **key insights** into

- what law does, how it operates, why it matters
- what law has to do with computer science
- the content of legal norms that apply to the processing of personal data
- the content of proposed legislation that applies to AI
- notes on procedure and enforcement: fines and liability

### Objectives

- to gain a better understanding of the inner workings of the law
- to identify nonsensical headlines about the law
- to get a taste of EU legislation that co-defines the global marketplace
- to be able to reason about the content of law
- to initiate legal protection by design

Required Reading:

- Mireille Hildebrandt, *Law for Computer Scientists and Other Folk* (2020 Oxford University Press), available in open access: <https://fdslive.oup.com/www.oup.com/academic/pdf/openaccess/9780198860884.pdf> (Chapters 5 and 10)
- Feedback on the AI Regulation as part of the European Commission's Consultation: [https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12527-Artificial-intelligence-ethical-and-legal-requirements/F2662611\\_en](https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12527-Artificial-intelligence-ethical-and-legal-requirements/F2662611_en)

## 1. What law does

Law is not a hurdle to be taken, even though many like to portray it that way. It does not merely constrain but also enables. Often the constraints are not a bug but a feature: without the constraints no enablement. This is something computer scientists should understand better than many a lawyer.

Law does things based on so-called speech acts that have performative effect: once the civil servant declares you husband and wife a whole range of legal consequences kick off. Whether or not the civil servant can marry two men or two women depends on the law that is in force in a particular jurisdiction.

Studying law means studying what law does: what legal effect it brings to what actions/status/events under what legal conditions. Because the effect and the conditions are articulated in natural language, there is room for contestation. This is not a bug but a feature.

During the first hour we will demonstrate what law does, how it operates and why that matters. For individuals, for companies, for research institutes, for governments and for societies. We need to begin with this first step to prevent kicking off on the wrong footing: law is a system of legal rules, but the nature of these rules differs from moral rules, from causal relationships and from computer code.

## 2. A deep dive into the GDPR

The EU General Data Protection Regulation (GDPR) is focused on the processing of personal data. It has two objectives:

- a. free movement of personal data within the EU  
in a way that
- b. protects fundamental rights and freedoms of natural persons.

The GDPR basically says: processing of personal data is allowed, if certain conditions are fulfilled.

In the tutorial we will explain the main legal conditions that apply:

- the legal ground (not that's not necessarily consent)
- lawfulness, transparency, fairness, purpose limitation, data minimization, accuracy, storage limitation, integrity & confidentiality and accountability
- dedicated transparency obligations (and rights)
- data protection by design and default
- who must comply: explaining the concepts of controller and processor

### 3. A deep dive into the proposed EU AI Regulation

The upcoming AI Regulation aims to clarify the legal conditions that apply to high risk AI systems. The Regulation also applies to systems that are not high risk, if they are part of a prohibited AI practice, and it has dedicated transparency requirements for systems that interact with humans, that engage in emotion recognition or biometric categorization and to systems that produce 'deep fakes'.

The tutorial will provide an overview of the Regulation, with special attention to:

- The definition of AI systems
- The definition of high risk AI systems
- The requirements that apply to high risk systems: a specified risk management system, specified requirements for data and data governance, dedicated reporting and documentation, specific transparency obligations, detailed stipulations for human oversight and for accuracy, robustness and cybersecurity
- Keen attention to whom the Regulation applies and what enforcement mechanisms are at play

### 4. Why law matters for AI: legal protection by design

Finally, the tutorial will explain how law relates to ethics, and why 'ethical AI' is an oxymoron, just like 'legal AI'.

In a democracy, law is decided by a democratic legislature at the generic level and by courts at the level of individual cases. This is how the rule of law contributes to prevent arbitrary application of legal norms.

For a democracy to thrive, a set of fundamental rights must be instituted and protected in a practical and effective way. If our technical infrastructures (mobile connectivity, internet, web, smart grids etc.) determine to a large extent whether or not our fundamental rights are protected in fact, we need to ensure legal protection at the level of the technologies.

This is called 'legal protection by design' (LPbD) and should not be confused with attempts to replace legal with technical constraints. Instead LPbD aims to introduce core tenets of the rule of law in AI systems, notably transparency and contestation.

LPbD also takes a 'by design' and a 'by default' approach to the substance of fundamental rights (e.g. privacy, non-discrimination, freedom of expression etc.), without reducing these rights to an engineering problem.