READING MATERIALS FOR THE COURSE ON
LEGAL ASPECTS OF ARTIFICIAL INTELLIGENCE
BY PROF. DR. ARTHUR WOLFF

LEGAL ASPECTS OF ARTIFICIAL INTELLIGENCE

PART 1: COURSE OUTLINE

BY

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COURSE NAME:

LEGAL ASPECTS OF ARTIFICIAL INTELLIGENCE

LANGUAGE: English

COURSE DESCRIPTION:

- **Course objectives**

ARTIFICIAL INTELLIGENCE (AI) – THE MOST TRANSFORMATIVE TECHNOLOGY OF THE 21ST CENTURY

As *"a set of technologies that enable computers to perceive, learn, reason and assist in decision making to solve problems in ways that are similar to what people do,"*[1] Artificial Intelligence (AI) is the key driver of the "fourth industrial revolution" and thus the most transformative technology of the 21st Century. And it is not something of the future. It is already here and everywhere (for example, every smartphone), in every industry and every sector driving down the cost of doing business, improving the quality of decision making, and increasing the personalisation and responsiveness of services. It therefore also creates challenges for policy makers, regulators, the legislator and lawyers. However, while having enormous positive potential, it also carries significant legal, security, and performance risks. Just as AI may transform the success of businesses that use it well, it may also be at the root of risks, legal or otherwise. It may, for example, cause future corporate failures and social harms.

And AI isn't just another technology. On the contrary – because of its ability to alter and in some cases replace human processes, the way we have traditionally supervised and assured the judgement of our human resources will have to be reinterpreted if it is to be applied effectively to AI. After all, a single algorithm may affect the lives of millions of customers, suppliers and counterparties, and be responsible for decisions worth billions and the reputation of entire organisations. AI thus holds enormous promise, but it requires responsible deployment. If business does not take on that responsibility, then other bodies may feel obliged to step in

Starting with an introduction explaining what AI is, this course sets out and tries to answer a series of practical legal questions regarding AI. Being an introduction to the legal aspects of AI, these questions do not require specialist legal or technological knowledge. The purpose of the course is to clarify some

[1] 'The Future Computed: Artificial Intelligence and its role in society', Microsoft, January 2018, p.28 – https://news.microsoft.com/uploads/2018/01/The-Future-Computed.pdf

of the questions and discuss relevant issues in order to enable students to understand the legal aspects of AI and to provoke further thoughts.

The aim of the course is to provide students with

- authoritative, single source information on and an understanding of all legal aspects of AI, in particular associated business transactions
- in addition to useful insights into legal aspects of AI also with an understanding of its economic and business impact
- sufficient knowledge of and practical insight into the technical features of AI as they influence the type of legal challenges raised by AI.
- an introduction to the main features of selected areas of law and legal practice and how they may be affected by AI.

- **Course Content**

The course will introduce the legal aspects of AI, in accordance with the detailed syllabus set out below.

There is particular focus on developing the students' ability to analyze, evaluate and understand the various aspects of the development, deployment and use of AI and the legal challenges arising from it. Practical examples and case studies will be considered and discussed.

- **Course Learning Outcomes**

On completion of the course the students will have acquired the following knowledge, skills and understanding:

1. Knowledge and Understanding

On completion of the course the students will have acquired a fundamental knowledge and understanding of:

- the technical and business background of AI
- the key legal questions and issues arising from the development, deployment and use of AI
- how these challenges might be accommodated by existing legal frameworks and where adaptations or new laws may be required
- how AI may be deployed and used in legal practice.

2. Practical Skills

The course will help students develop the following practical skills:

- to undertake the reading and research of the sources of relevant law
- the ability to think critically and to express ideas
- to intelligently and intelligibly use (legal) English that is grammatically correct and correctly spelled.

WHAT IS COVERED WITHIN THE SYLLABUS?

The course will cover the topics listed below using the method described after this list of topics.

SYLLABUS

AN INTRODUCTION TO AI SYSTEMS

- What is AI?
  - The technical context
    - Common types of AI
    - The basic/technology
  - The business context – AI as a market reality
  - AI and its use in robotics

REGULATION AND GOVERNANCE OF AND POLICY APPROACHES TO AI

- Some misconceptions of AI
- How will AI affect the Law? – Regulation and governance
- Current developments
- Outlook to the future
- The role of government
- The role of international organizations and states
- The example of China

BASIC LEGAL ISSUES

- Interplay of legal and ethical issues
- The evolution of background law

AI AND THE LAW

- How can AI be protected? – Intellectual property law aspects
- How will AI affect the law?
- How will AI change the practice of law?
- How is AI used to help lawyers?
- Can a computer program enter into agreements and contracts?
- Should an intelligent agent be limited in what it is permitted to do?
- Should people bear full responsibility for their intelligent agents?
- Can AI be designed to obey the law?
- How can an AI system be held accountable for tortious or even criminal acts?

LEGAL ASPECTS OF AI

- Introduction
- Some common misconceptions
- AI: policy and regulatory approaches
- AI and data protection
- AI and agency law
- AI and contract law
- AI and intellectual property, in particular patent and copyright law
- AI and intellectual property: rights in relation to data
- AI and tort law: product and other no-fault/strict liability, fault liability
- Other areas of law

INTELLECTUAL PROPERTY RIGHTS IN AI SYSTEMS

- Algorithms
- Patent law
- Copyright law
- Confidential know how/trade secrets
- Data sets
- Infringing and derivative works

AUTOMATED BIAS AND DISCRIMINATION

- Automated bias and discrimination
- Data protection laws in various countries
- Equality legislation in various countries
- "Fake News" and other data biases

AI AND ETHICS

- Ethical design and use of AI
- Guidelines and rules in various countries, in particular China

AI AND CONTRACTS

- Contracting for the acquisition of AI
  - Licenses
  - AI as a service
  - Intellectual property
  - Representations and warranties
- Smart contracts and blockchain

CIVIL LIABILITY – CAUSATION AND FAULT

- Causation
- Existing liability frameworks
  - Contract
  - Tort
  - Strict liability
- Future AI-related liability frameworks

CRIMINAL LIABILITY

- Instrumental extension – AI as a tool in crime
- Direct machine liability
- Strict liability

THE CRIMINAL JUSTICE SYSTEM – BAIL AND SENTENCING DECISIONS USING AI

- Current practice
- Current problems

AI AND COMPANY LAW

- The cybernetic corporation or digital autonomous organization (DAO)
- Appointment of artificial intelligence systems as company directors
- Delegation of authority to AI
- Directors' general duties
- Transactional considerations – automated due diligence in mergers & acquisitions (M&A)

AI AND DATA-BASED MONOPOLIES AND COMPETITION LAW

- Market distorting effects: AI and competition law
- Pro-competitive vs. anti-competitive effects
- Data-based monopolies, competition law and the management and safe-guarding of dato for the public good and a well-functioning economy
- Regulatory responses

THE USE OF AI IN THE LEGAL FIELD AND DISPUTE RESOLUTION

- The use of new technologies in the legal field – "LegalTech"
- The use of AI by the legal profession
- The use of AI in
  - civil courts
  - criminal courts
  - arbitration
- AI as judge or arbitrator?

METHOD USED IN THE LECTURE, EXERCISES AND CASE STUDIES

The course blends class discussion of the topics with the presentation and discussion of practical examples and case studies.

COURSE READING MATERIALS

The students will receive online the following course reading materials written by Prof. Wolff totaling about 250 pages plus some Annexes explaining and discussing the topics listed above.

Part 1: Course Outline

Part 2:
- Instructions and Schedule for Reading the Course Reading Materials
- Information on Assessment of Students' Performance
- Instructions for Written Assignments
- Information on the Oral Examination

Part 3: Course Power Point Presentation

Part 4: Test Your Knowledge – Examination Questions

Part 5: Legal Aspects of Artificial Intelligence

LECTURER

PROF. ARTHUR WOLFF is an Austrian lawyer whose practice focuses on international business transactions, foreign direct investment and arbitration with a special emphasis on China. He has taught for up to 20 years courses on foreign direct investment/joint ventures, licensing and technology transfer, legal aspects of doing business in Asia und computer law and the legal aspects of artificial intelligence at universities in Austria and has been teaching for 20 years courses on international commercial contracts, foreign direct investment/joint ventures and licensing and technology transfer, international commercial arbitration and recently also the legal aspects of artificial intelligence and also of China's Belt & Road-Initiative at universities in Beijing, Shanghai and Qingdao. Prof. Wolff has worked in the fields of FDI/JV and licensing/technology transfer also as a consultant for the United Nations Industrial Development Organisation (UNIDO) and in the area of licensing/technology transfer as a trainer for the World Industrial Property Organisation (WIPO). He was chairman of the Advisory Committee on UNIDO's Technology Transfer Manual, to which he also contributed as an author, and wrote for UNIDO a study on Joint Ventures. He is a frequent speaker at conferences and seminars and author of books and contributions to journals on topics related to his areas of specialization. Prof. Wolff has acted as counsel and arbitrator under the rules of various arbitration institutions and in China is an arbitrator of the China International Economic and Trade Arbitration Commission since 1996 and of the Shanghai and the Wuhan International Arbitration Commission.

CLASS HOURS, DATES AND TIME:

DATES: 8-15 July
TIME: 2 hours from 2 to 3:50 pm

ASSESSMENT:

The students' performance will be assessed (as explained in detail in Part 2 of the Course Reading Materials) on the basis of two short written assignments and an oral examination.

Attendance is mandatory. Students are required to read the course materials before each class (as instructed in the schedule in Part 2 of the Course Reading Materials), and encouraged to participate actively in class in discussions and must complete the 2 written assignments/exercises, which together with the final oral examination the students' assessment. The course grade will be a function of the written exercises/assignments and the final oral examination.