LexisNexis®


# AI and the legal profession

## Managing risks and harnessing opportunities

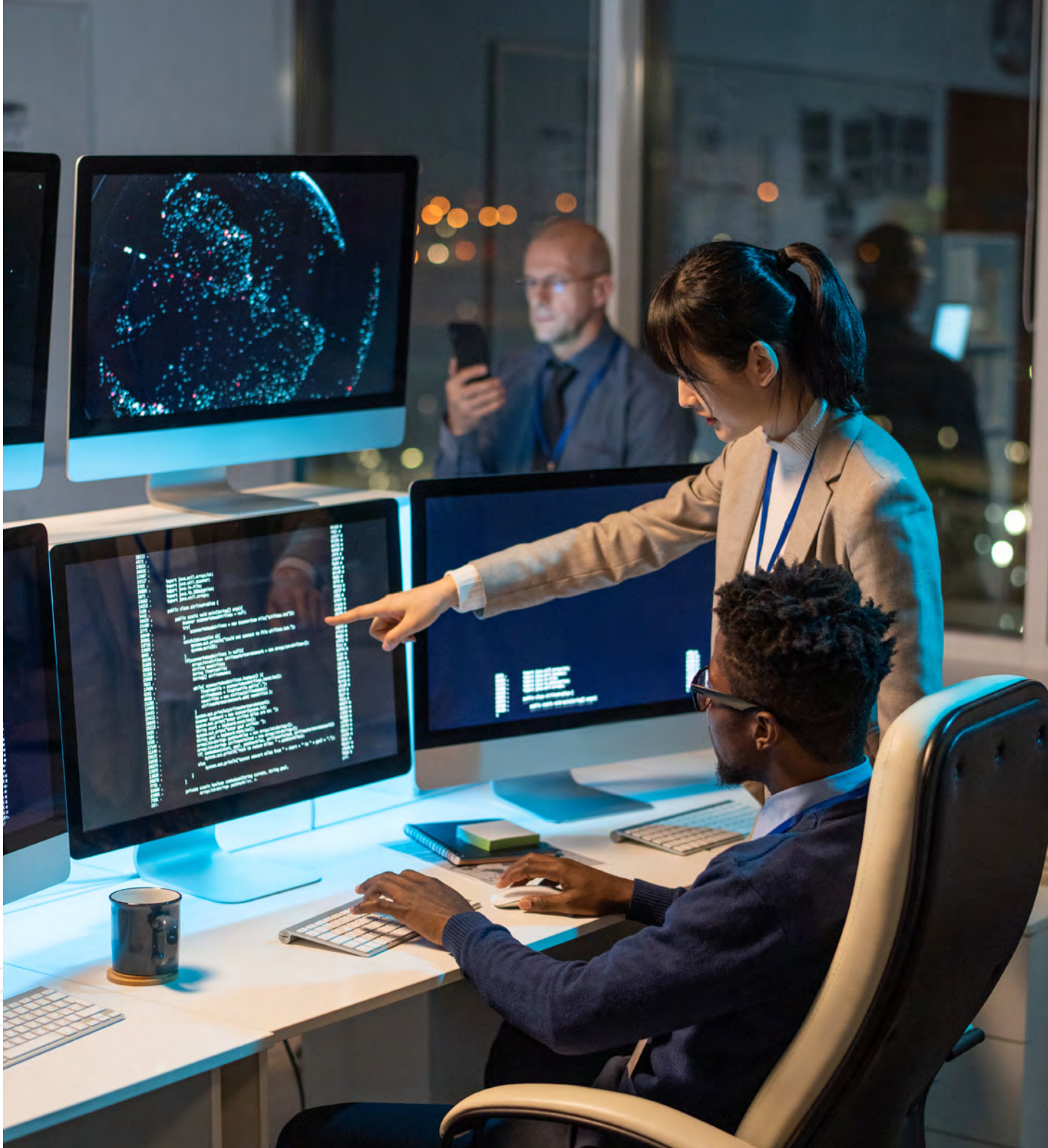
# Introduction

Artificial Intelligence and its sub-discipline Machine Learning ('AI/ML') are not only changing our day-to-day lives, but also the ways in which the relationships between us as individuals and between the individual and the state unfold and are regulated. Legal professionals have an important role to play in both harnessing the power of AI/ML to the good and preventing the harms that may flow from an unreflective application of this technology.

A working understanding of AI/ML is becoming essential to legal practice. On a practical level, many AI-enabled legal technology products have come onto the market. A good understanding of the capabilities of AI/ML will enable decision-makers to scope out the potential for AI in their firm and ensure that a product in fact meets their needs. On a broader scale, lawyers may encounter a need to advise on regulation of AI, act as administrative decision-makers assisted by AI, or advise their clients on the adoption or development of AI-based technologies.

This paper covers

- The meaning of AI/ML
- Creating ethical, accountable and transparent AI
- Harnessing AI in your legal practice to drive better client outcomes



# Partnering to equip the legal profession with AI knowledge and skills

LexisNexis Pacific has partnered with the University of Technology Sydney (UTS) to deliver training for lawyers in the skills needed to adapt and thrive in this era of rapid technological transformation. A recent webinar hosted by LexisNexis brought together a panel of subject matter experts: Ed Santow, Director – Policy & Governance at the UTS Human Technology Institute, Aurelie Jacquet, consultant on responsible AI and Chair of the Standards Australia Committee on Artificial Intelligence, and Claire Linwood, Product Manager at LexisNexis.

The panel sorted fact from fiction, delved into the ethical issues, and considered how human-centred design and respect for users' data and privacy can be built into the AI development.

# Understanding AI: the mimicking of human intelligence by machines

Key to understanding the opportunities and challenges posed by AI is sorting what is AI from what it is not. In an evolving technological landscape – and one in which misinformation is commonplace – it is important for practitioners to have a basic conception of AI. It is worth emphasising that it is not necessary to understand in detail how a particular algorithm works (lawyers will breathe a sigh of relief that there is no need to study probability, vectors and matrices).

But, it helps to be aware of questions that can shed light on how an AI model operates; for example, how was this model tested? What sorts of assumptions were built into this model? What sorts of training data were used and what was the source of that data? What measures were taken to minimise bias and overfitting in the design of the solution?

Each panellist gave their working definition of AI/ML and touched on some common misconceptions about AI. Ed Santow emphasised that AI is not a 'magic' technology, capable of providing the right answer to any question, and that understanding the building blocks of AI is important for ensuring that we use it well and avoid risks of harm. He noted four of the phenomena that have combined to make possible the advances in AI technology that we are experiencing today: the rise of 'Big Data'; progress in ML; the rise of automation; and the massive increases in computing power that have occurred over time.

Similarly, Claire Linwood emphasised the distinction between artificial general intelligence ('AGI') and artificial narrow intelligence ('ANI'), with the former a theoretical concept confined to the realm of science fiction. AI can be defined as the programming of machines to mimic aspects of human intelligence, including reading, reasoning, recognising what is in a photograph, and making decisions. While AGI is human-like intelligence that is generalisable to vastly different areas of life, ANI is the training of AI/ML to perform specific tasks. Applications of ANI are common in our day-to-day lives.

Aurelie Jacquet noted that it is difficult – given the constant development and evolution in AI models and techniques – to arrive at the sort of tight definition of AI that lawyers would prefer. As it mimics aspects of human behaviour, Microsoft Excel can be considered an early example of doing AI. However, early attempts at AI are no longer comparable to what can be achieved today via ML techniques; that is, instead of a rules-based decision tree programmed by a human, the rules themselves can now be derived from patterns in masses of data and then re-applied to new situations.

# Creating ethical, accountable, and transparent AI

The concept of ethical and responsible AI development is relevant both to the uses that we can make of AI as legal professionals, and to the role that lawyers may play in advising on or regulating AI.

Asked about the meaning of ethical AI for organisations, Aurelie Jacquet noted that for organisations there are two aspects to consider. There is a pre-regulatory, or anticipatory regulatory, aspect to ethical AI; while existing laws (e.g. anti-discrimination, privacy etc) apply to AI, there are now on the books regulatory changes, updates and guidances that are specifically targeted at AI, and more regulation is coming. For instance, a New York City law that requires employers to audit their automated employed-related decision-making tools for bias is due to come into force in April 2023. In the EU, the draft Artificial Intelligence Act requires the certification of certain AI systems. So, there is significant compliance and safety focus to responsible and ethical AI – something that lawyers in general are very familiar with.

The second aspect of ethical AI – beyond bare compliance – is well illustrated through the AI ethics principles of fairness, beneficence and human-centredness. These principles also correlate with principles of responsible business conduct.

As Aurelie observed:

*"When an organisation uses AI to automate decisions that can impact individuals, group of individuals or society, it is effectively embedding values [into the system] and automating it. As social values vary and evolve, decisions and judgments change with them. For example, what was socially acceptable 5 years ago may no longer be today, so when using AI model trained on historic data to make decisions, there is also a responsibility to ensure the automation reflects, aligns and adapts to the relevant community values."*

She also outlined that one of the key challenges with AI is that it is not always visible to the end user how and what part of their data is used to obtain insights or make decisions about them. And this is why AI principles such as accountability, explainability and transparency are key concepts in the regulation of AI decision-making. She also explained that in Europe there have been discussions as to whether reverse presumption should be adopted for AI systems, and that in the new AI Liability Directive, the EU decided on a middle way where:

"The Directive simplifies the legal process for victims when it comes to proving that someone's fault led to damage, by introducing two main features: first, in circumstances where a relevant fault has been established and a causal link to the AI performance seems reasonably likely, the so called '**presumption of causality**' will address the difficulties experienced by victims in having to explain in detail how harm was caused by a specific fault or omission, which can be particularly hard when trying to understand and navigate complex AI systems. Second, victims will have more tools to seek legal reparation, by introducing **a right of access** to evidence from companies and suppliers, in cases in which high-risk AI is involved".[1]

1 https://ec.europa.eu/commission/presscorner/detail/en/ip_22_5807

# Using AI to our advantage as legal professionals

We can think of AI/ML from the perspective of lawyers as end users. This point of view may differ from that of lawyers as regulators or trusted advisors of their clients.

One of our panellists touched on a key AI capability for legal professionals: the use of the techniques of natural language processing ('NLP') to ingest large amounts of material and surface insights.

Lawyers trade in communication and the analysis of words and documents. Ed Santow noted that legal practice – particularly for early career lawyers – can involve reading, making sense of, and deriving insights from a large quantity of material. Classic examples of this type of work occur in due diligence or discovery. He emphasised that these tasks may not be the most edifying in a junior lawyer's practice and are often slow and painstaking. NLP – a sub-type of AI – overcomes the limitations of older keyword searching methods by allowing the computer to ingest and 'read' large amounts of material much more efficiently than a human could.

This use case exemplifies the promise of AI/ML products for many legal professionals: the efficiency gains and risk reduction that flow from taking advantage of the speed at which machines are able to process large amounts of information. Harnessing the benefits of NLP in processing large quantities of data can free up more time for lawyers to perform higher-order analytical tasks.

In other words, AI-driven solutions and tools are intended to complement lawyers in their work by removing the need to perform time-consuming and repetitive tasks. They cannot and are not designed to usurp lawyers' roles by attempting to perform uniquely human functions, such as building relationships and weighing up incommensurable objectives (like fairness versus efficiency) as part of a decision-making exercise.

As Santow observed:

*"...really what you're doing is like generating leads, so you're generating potential insights that you can then consider. And I think over time what that's going to do is make the job of being a lawyer much more stimulating, because it allows us to focus on the tasks that we as humans are, I think, much better suited to."*

# Building human-centred, ethical design into AI product development

Claire Linwood, Product Manager at LexisNexis Pacific weighed in with her views on how to build responsible and ethical AI, as well as principles of human-centred design, into the product development process. She agreed that it is necessary to consider the whole product lifecycle when building AI: how do we ensure that values and principles that are embedded in a product at the development stage are maintained?

In her view, constant engagement with stakeholders – with stakeholders defined in a very broad sense – is the most crucial aspect of building human-centred AI. Key stakeholders include internal teams and business partners, notably legal, compliance, and data privacy and security teams. Stakeholder consultation also encompasses frequent testing and communication with end users in order to ensure that the AI-driven products developed both respond to a real user need or problem and are ultimately fit for purpose.

The starting point for focus on the end user is a detailed understanding of the 'problem space':

*"...we need to understand in a deep sense what is the pain point that our customer or our user is facing. How could we assist in building a solution that can respond to this problem? And I think it's only once you understand the problem space in detail that you can think, OK, in consultation with engineers and data scientists, how can we respond to this with a technical solution? And would AI actually be the right thing to use to respond to this need?"*

The most appropriate solution may or may not be AI-driven. If the solution is AI-based, it is crucial to understand what sort of data is required, how that data will be gathered or created, and how to avoid overfitting the AI model to the available data such that its output is not generalisable to other situations. Once built, it is then essential to take the solution back to customers for testing and comment in an iterative process of development that continually tests the development team's assumptions and hypotheses.

# Conclusion

AI-driven solutions have permeated legal practice in recent years, and lawyers can expect to see more products covering various aspects of their workflows come onto the market. LexisNexis Pacific itself has released two AI-driven products in the last year: **Lexis® Clause Intelligence** and **Lexis® Argument Intelligence**. AI techniques are also used routinely to improve search relevance on Lexis Advance.

It is important for legal professionals to understand the basics of AI and the ways in which AI-based technologies can both serve us and help us to achieve our goals, while retaining a critical eye towards the potential for AI to perpetuate injustice or fail to express and uphold our key values.

Curious about how AI/ML could improve your legal research efficiency? **Contact LexisNexis today.**

**Call:** 1800 772 772
**Email:** sales.enquiries@lexisnexis.com.au
**Visit:** www.lexisnexis.com.au

## Further Reading


- RELX Responsible AI principles
- CSIRO – Artificial Intelligence
- UTS Human Technology Institute
- Wall Street Journal, 'New York's Landmark AI Bias Law Prompts Uncertainty'
- European Commission – 'New liability rules on products and AI to protect consumers and foster innovation'
- WHITEPAPER Artificial Intelligence and legal research: Legal expertise, augmented


# About our facilitator and panellists

## Edward Santow

**UTS Industry Professor- Responsible Technology**

Edward Santow is the Director - Policy & Governance at the Human Technology Institute, and Industry Professor - Responsible Technology at the University of Technology Sydney. Ed leads the Human Technology Institute (HTI) with Prof Nicholas Davis and Prof Sally Cripps. HTI is building a future that applies human values to new technology, through the creation of three interconnected laboratories: the Human Technology Skills Lab, Tools Lab and Policy Lab.

Ed is leading a number of major initiatives to promote human-centred artificial intelligence. This approach aims to uphold human rights by ensuring that new technology delivers results that are fair, accurate and accountable. Ed's areas of expertise include human rights, technology and regulation, public law and discrimination law.

From 2016-2021, Ed was Australia's Human Rights Commissioner, where he led the Commission's work on AI and new technology; refugees and migration; human rights issues affecting LGBTI people; national security; and implementing the Optional Protocol to the Convention Against Torture (OPCAT).

## Aurelie Jacquet

**Consultant responsible for AI &**

**Chair of the Standards Australia Committee on AI**

Aurelie is an independent consultant who advises ASX 20 companies on the responsible implementation of AI. She also works as Principal Research Consultant on Responsible AI for CSIRO-DATA61, she is a member of the NSW Government AI Committee and the co-chair of ACS' AI Ethics Committee.

She also leads global initiatives for the implementation of Responsible AI. To cite a few, she is
The chair of the standards committee representing Australia at the international standards (ISO) on AI; the co-chair of the first accredited global certification program for AI developed by the Responsible AI Institute for the World Economic Forum; and an expert on AI Classification and Risk for the OECD.ai Group

In 2021, she was also appointed by the European Commission as an expert as part of their international outreach initiative, which helps promote the EU's vision on sustainable and trustworthy AI. Also in 2021, she won the Australia-New Zealand Women in AI and the Law award, she was recognised by Women in AI Ethics (WAIE) as one of the 100 Brilliant Women in AI Ethics globally, and the Responsible AI Institute Leadership Award.

## Claire Linwood,

**Product Manager – LexisNexis**

Claire Linwood is a Product Manager at LexisNexis Pacific. Her portfolio covers forms and precedents and other drafting and legal workflow efficiency tools.

Prior to entering product management, Claire worked at the Supreme Court of New South Wales and as a solicitor at the NSW Office of the Director of Public Prosecutions.

Claire's product interests include AI product development and human-centred design in legal tech.

## Veronica Rios

**Director of Strategic Partnerships & Global Associations – LexisNexis**

Veronica leads the strategic partnerships program at LexisNexis Pacific. With over 15 years of experience in the legal services and content provider space, Veronica has worked in various roles including content creation, product, strategy and business development. Veronica supports LexisNexis in its mission to advance the rule of law through collaboration on innovative projects with partners including the Australian Human Rights Commission, Attorney Generals Department of Maldives and the National Association of Community Legal Centres. In 2017, Veronica was awarded the "Maverick of the Year" Bronze Awards for Women in Business for her work in supporting access to justice and human rights. Veronica completed her undergraduate degree at Macquarie University and has a Masters in Human Rights Law and Policy from the University of NSW





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