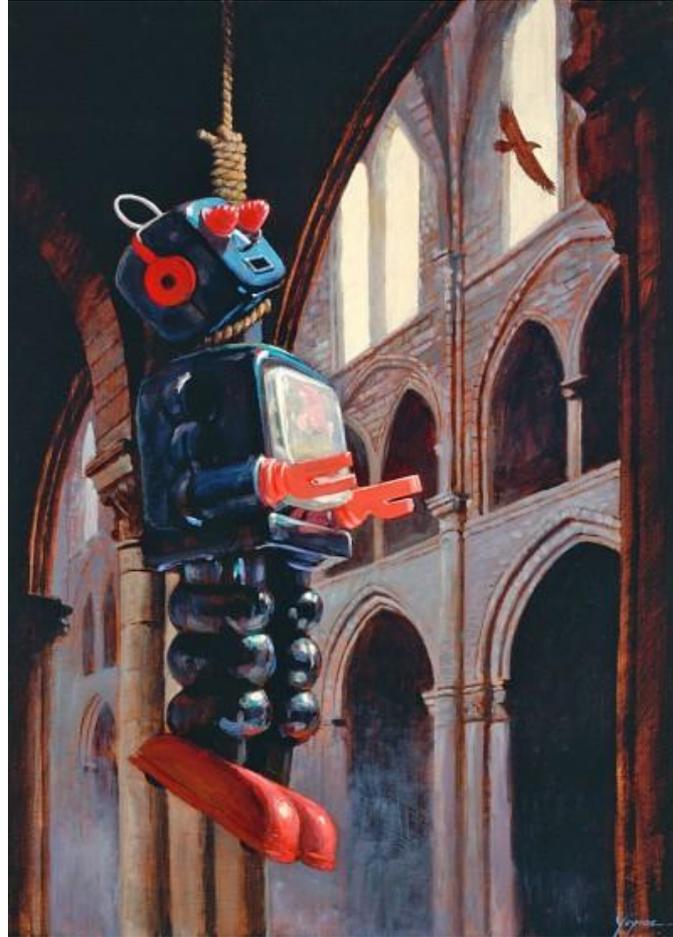


computational law and its enmities



@ianrkerr

canada research chair in ethics, law & technology

university of ottawa

legal chatbots

The World's First Robot Lawyer

My flight was delayed on the way to Paris. I would like some compensation.

Show me the signs on 1850 M Street

Login Or Signup

Prove HIV Disclosure (no signup)

 Follow

I got an unfair parking ticket. Can you appeal for me?

What happens if I can't afford a speeding ticket?

Chatbots

Chatbot lawyer overturns 160,000 parking tickets in London and New York

Free service DoNotPay helps appeal over \$4m in parking fines in just 21 months, but is just the tip of the legal AI iceberg for its 19-year-old creator

Samuel Gibbs

Tuesday 28 June 2016 11.07 BST



This article is 4 months old

Shares

11,959



DoNotPay has been helping Londoners and New Yorkers fight illegal parking fines, like this one from Lambeth in London. Photograph: Alamy

An artificial-intelligence lawyer chatbot has successfully contested 160,000 parking tickets across London and New York for free, showing that chatbots can actually be useful.

Dubbed as “the world’s first robot lawyer” by its 19-year-old creator, London-born second-year Stanford University student Joshua Browder, [DoNotPay](#) helps users contest parking tickets in an easy to use chat-like interface.

The program first works out whether an appeal is possible through a series of



what are the limits of computational law?

(substitute legal decision-making)

AI program able to predict human rights trials with 79 percent accuracy

by James Vincent | @jjvincent | Oct 24, 2016, 8:05a



Thomas Lohnes/Getty Images

NEW TRENDING STORIES



Microsoft Surface Studio PC announced



ROSS

Your Brand New Artificially Intelligent Lawyer



Every minute you spend on legal research is time you can't bill for.

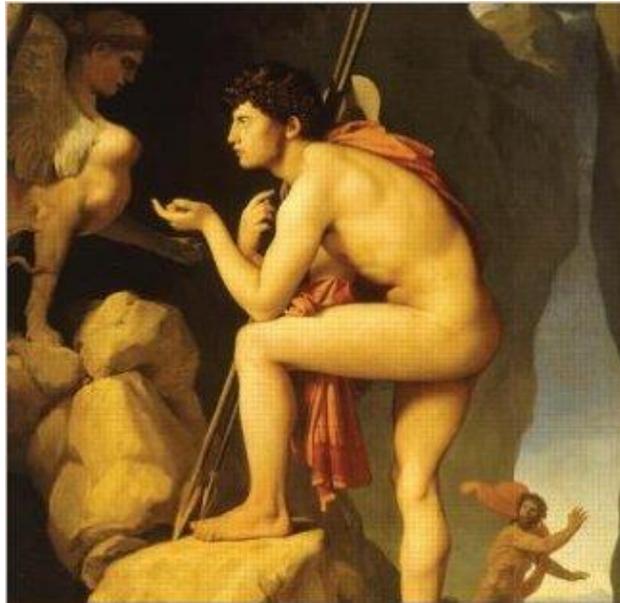
ROSS is an A.I. lawyer that helps human lawyers research faster and focus on advising clients.

[Start today](#)

Search less, find more

Ask direct questions and ROSS will use A.I. to find you answers from the law in seconds - no more fumbling with boolean queries and thousands of keyword based results.





a GlassHouse book

Privacy, Due Process and the Computational Turn

The philosophy of law meets the philosophy
of technology

Edited by Mireille Hildebrandt and
Katja de Vries



A search input field with a thin blue border. It contains a single vertical bar cursor on the left side. On the right side of the field, there is a small microphone icon, indicating voice search functionality.

Google Search

I'm Feeling Lucky

Google.ca offered in: [Français](#)



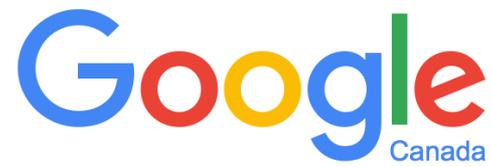
'prediction', 'computation', 'law' and 'theory'



Google Search

I'm Feeling Lucky

Google.ca offered in: [Français](#)



'prediction', 'computation', 'law' and 'theory'



Google Search

I'm Feeling Lucky



Google.ca offered in: [Français](#)



WIKIPEDIA
The Free Encyclopedia

[Main page](#)
[Contents](#)
[Featured content](#)
[Current events](#)
[Random article](#)
[Donate to Wikipedia](#)
[Wikipedia store](#)

Interaction
[Help](#)
[About Wikipedia](#)
[Community portal](#)
[Recent changes](#)
[Contact page](#)

Tools
[What links here](#)
[Related changes](#)
[Upload file](#)
[Special pages](#)
[Permanent link](#)
[Page information](#)
[Wikidata item](#)
[Cite this page](#)

[Create account](#)  [Not logged in](#) [Talk](#) [Contributions](#) [Log in](#)

Article [Talk](#)

[Read](#)

[Edit](#)

[View history](#)



Prediction theory of law

From Wikipedia, the free encyclopedia

The **prediction theory of law** was a key component of the [Oliver Wendell Holmes](#)' jurisprudential philosophy. At its most basic, the theory is an attempted refutation of most previous definitions of the [law](#). Holmes believed that the law should be defined as a prediction, most specifically, a prediction of how the courts behave. His rationale was based on an argument regarding the opinion of a "bad man." Bad men, Holmes argued in his speech "[The Path of the Law](#)",^[1] care little for ethics or lofty conceptions of natural law; instead they care simply about staying out of jail and avoiding the payment of damages. In Holmes's mind, therefore, it was most useful to define "the law" as a prediction of what will bring punishment or other consequences from a court.

The theory played a key role in influencing [American Legal Realism](#).

[H. L. A. Hart](#) criticized the theories in his *The Concept of Law* (1961). He argued that (1) they were blind to the internal point of view towards law, the sense shared by officials and law-abiding citizens that rules of law `ought' to be obeyed, and (2) they undervalue "the ways in which the law is used to control, to guide, and to plan life out of court."^[2] As for the `bad man', Hart asks, "Why should not law be equally if not more concerned with the `puzzled man' or `ignorant man' who is willing to do what is required, if only he can be told what it is? Or with the `man who wishes to arrange his affairs' if only he can be told how to do it?"^[3]

But Holmes previously wrote that "a bad man has as much reason as a good one for wishing to avoid an encounter with the public force, and therefore you can see the practical importance of the distinction between morality and law". Nearly every man wants to avoid the disagreeable consequences of disobeying the law, but not all want to obey the law just for the sake of obeying it. This is why the point of view of a bad man is better, because it is the only way to ensure that everyone will obey the law, and the only way to enable a lawyer to correctly advise his or her client.^[4]

See also [[edit](#)]]

- [Judicial activism](#)
- [Pragmatism](#)

predict |pri'dikt|

verb [with obj.]

to foretell the future; to say or estimate that (a specified thing) will happen in the future or will be a consequence of something

ORIGIN early 17th cent.: from Latin verb *praedicere*, from *prae-* 'beforehand' + *dicere* 'say.'

praedicere ≠ episteme

prediction **as proxy**

“I think there is a **world market** for maybe **five computers.**”

Thomas Watson, **IBM**

“640k ought to be enough for anyone”

Bill Gates, Microsoft



WIKIPEDIA
The Free Encyclopedia

[Main page](#)
[Contents](#)
[Featured content](#)
[Current events](#)
[Random article](#)
[Donate to Wikipedia](#)
[Wikipedia store](#)

Interaction
[Help](#)
[About Wikipedia](#)
[Community portal](#)
[Recent changes](#)
[Contact page](#)

Tools
[What links here](#)
[Related changes](#)
[Upload file](#)
[Special pages](#)
[Permanent link](#)
[Page information](#)
[Wikidata item](#)
[Cite this page](#)

[Create account](#)  [Not logged in](#) [Talk](#) [Contributions](#) [Log in](#)

Article [Talk](#)

[Read](#) [Edit](#) [View history](#)



Prediction theory of law

From Wikipedia, the free encyclopedia

The **prediction theory of law** was a key component of the [Oliver Wendell Holmes](#)' jurisprudential philosophy. At its most basic, the theory is an attempted refutation of most previous definitions of the [law](#). Holmes believed that the law should be defined as a prediction, most specifically, a prediction of how the courts behave. His rationale was based on an argument regarding the opinion of a "bad man." Bad men, Holmes argued in his speech "[The Path of the Law](#)",^[1] care little for ethics or lofty conceptions of natural law; instead they care simply about staying out of jail and avoiding the payment of damages. In Holmes's mind, therefore, it was most useful to define "the law" as a prediction of what will bring punishment or other consequences from a court.

The theory played a key role in influencing [American Legal Realism](#).

[H. L. A. Hart](#) criticized the theories in his *[The Concept of Law](#)* (1961). He argued that (1) they were blind to the internal point of view towards law, the sense shared by officials and law-abiding citizens that rules of law `ought' to be obeyed, and (2) they undervalue "the ways in which the law is used to control, to guide, and to plan life out of court."^[2] As for the `bad man', Hart asks, "Why should not law be equally if not more concerned with the `puzzled man' or `ignorant man' who is willing to do what is required, if only he can be told what it is? Or with the `man who wishes to arrange his affairs' if only he can be told how to do it?"^[3]

But Holmes previously wrote that "a bad man has as much reason as a good one for wishing to avoid an encounter with the public force, and therefore you can see the practical importance of the distinction between morality and law". Nearly every man wants to avoid the disagreeable consequences of disobeying the law, but not all want to obey the law just for the sake of obeying it. This is why the point of view of a bad man is better, because it is the only way to ensure that everyone will obey the law, and the only way to enable a lawyer to correctly advise his or her client.^[4]

See also [[edit](#)]]

- [Judicial activism](#)
- [Pragmatism](#)

“For the rational study of law the **blackletter** man may be the man of the **present** but the man of the **future** is the man of **statistics** and the master of **economics**.”

- Holmes

“The **duty** to keep a **contract** at common law means a **prediction** that you must **pay damages** if you do not keep it — and **nothing else.**”

- Holmes

“The object of our study, then, is **prediction**, the prediction of the incidence of the **public force** through the **instrumentality** of the courts.”

- **Holmes**

“The **prophecies** of what the **courts will do** in fact, and nothing more pretentious, are what I mean by the **law**.”

- **Holmes**

“In these **sibylline leaves** are gathered the **scattered prophecies** of the past upon the cases in which the axe will fall. These are what properly have been called the **oracles of the law**. Far the most important and pretty nearly the whole meaning of every new effort of ... thought is to make these **prophecies** more **precise**, and to **generalize** them into a **thoroughly connected system**.”

- Holmes

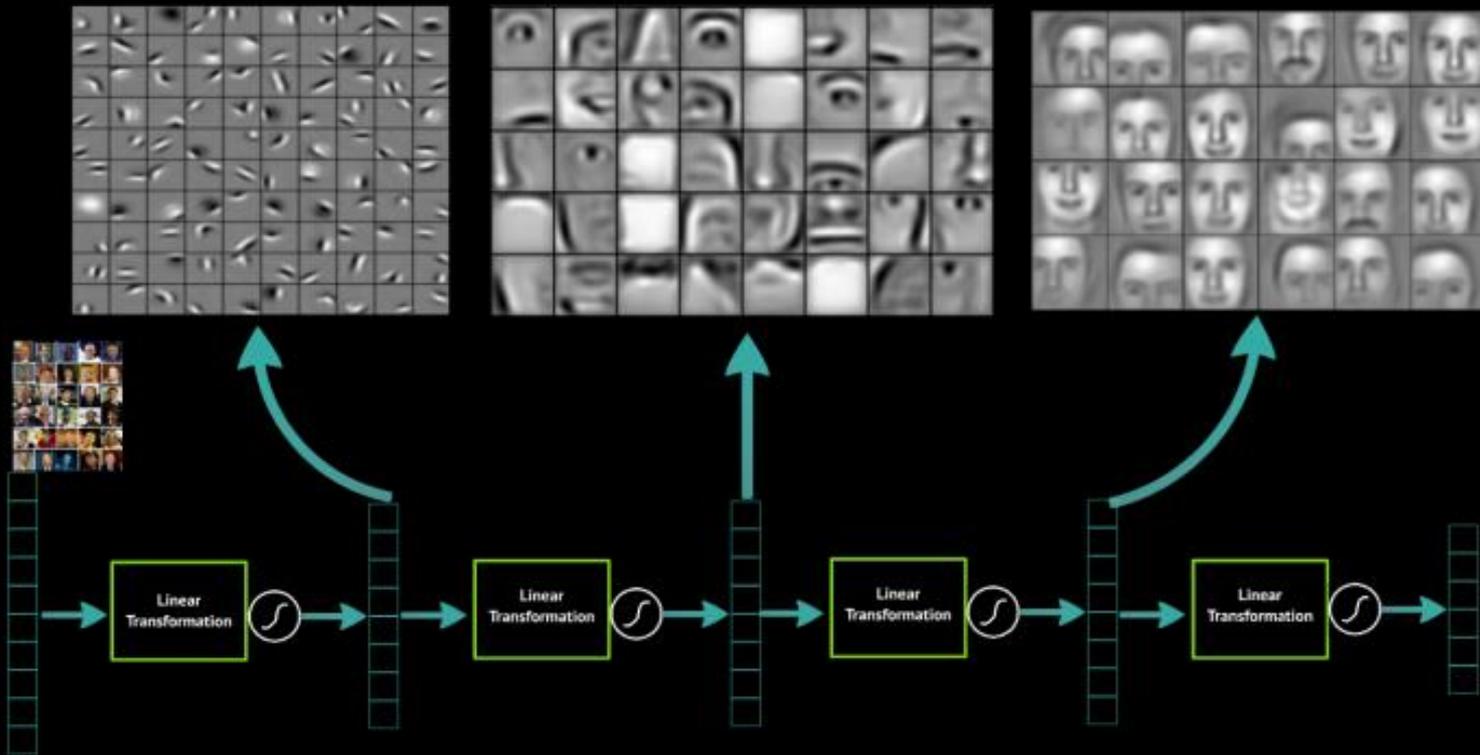


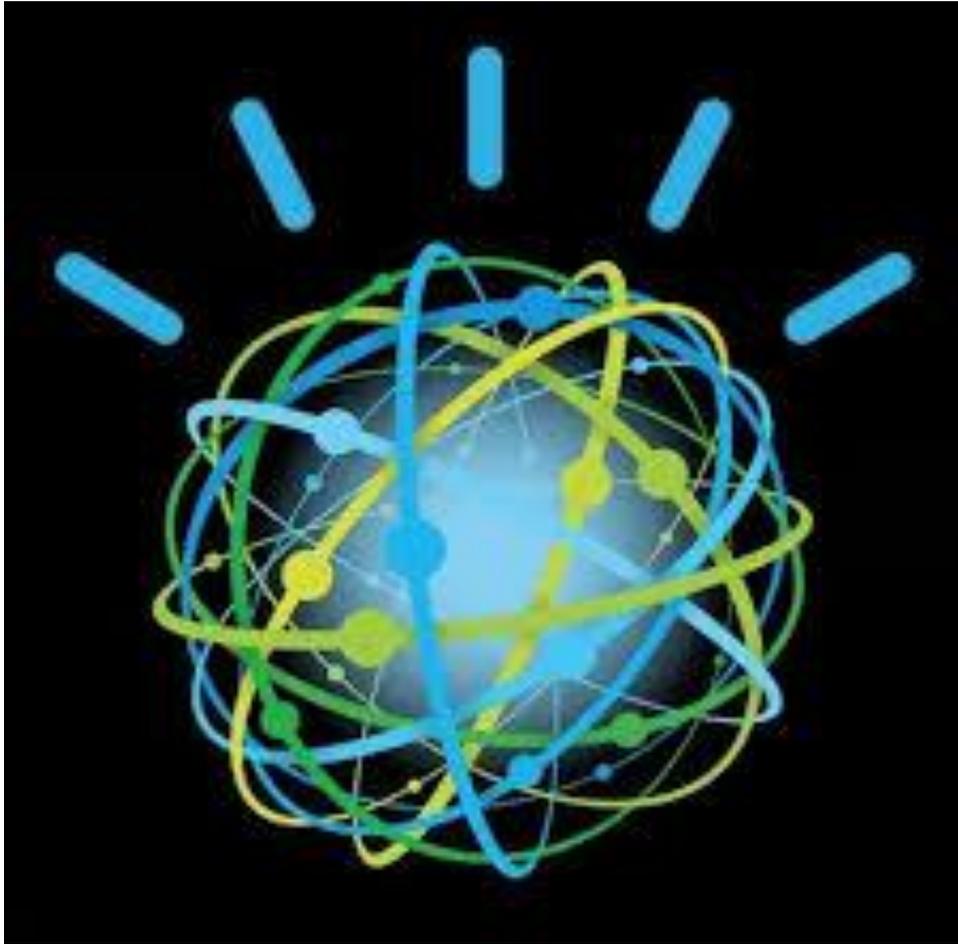
© PA

ORACLE®



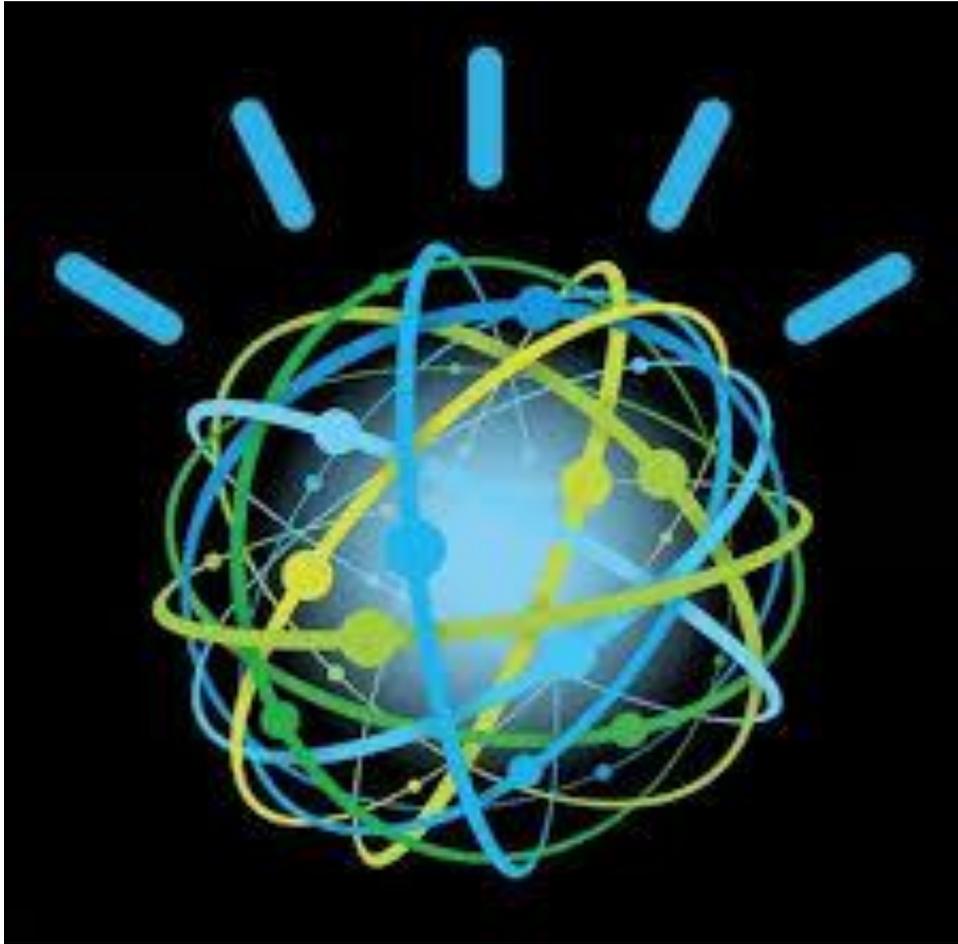
Deep Learning learns layers of features





“I think there is a **world market** for maybe **five computers.**”

Thomas Watson, **IBM**



ROSS

Your Brand New Artificially Intelligent Lawyer



Every minute you spend on legal research is time you can't bill for.

ROSS is an A.I. lawyer that helps human lawyers research faster and focus on advising clients.

[Start today](#)

Search less, find more

Ask direct questions and ROSS will use A.I. to find you answers from the law in seconds - no more fumbling with boolean queries and thousands of keyword based results.





U of T students' artificially intelligent robot signs with Dentons law firm

JEFF GRAY - LAW REPORTER
The Globe and Mail
Published Sunday, Aug. 09, 2015 4:42PM EDT
Last updated Monday, Aug. 10, 2015 9:09AM EDT

Visit TICKERS In This Story

20 Comments 2K 2K 664 G+1 11 Print / License AA

A class project-turned-startup launched by University of Toronto students that uses IBM's artificially intelligent Watson computer to do legal research now has backing from Dentons, the world's largest law firm.

Called Ross, the app uses Watson, which won the TV quiz show *Jeopardy!* in 2011, to scour millions of pages of case law and other legal documents in seconds and answer legal questions. Its founders liken it to a smarter version of iPhone's Siri, but for lawyers, and say it could one day replace some of the grunt research work now done by low-level associates at the world's top law firms. It is one of several attempts to apply what is called "cognitive computing" to the historically technology-averse legal profession.



THE BOTTOM LINE
Video: The Bottom Line:
Is an all-robot factory good or bad?

Dentons, the recently created global law firm that encompasses Canada's former Fraser Milner Casgrain LLP, has announced an undisclosed investment in startup Ross Intelligence Inc. The company will make use of the law firm's NextLaw Labs, a project aimed at developing new technology for the legal business and based in Palo Alto, Calif., in the heart of Silicon Valley. It is the first publicly disclosed startup that the NextLaw Labs project has signed up.

Sponsor Content

Home, sweet custom-built home

LEARN MORE

IN THE KNOW

- **GLOBE INVESTOR**
UNLIMITED Managers are showing a 'staggering' lack of confidence in their own mutual funds
- **REPORT ON BUSINESS**
General Mills ad campaign encourages 'smuggling' Dunkaroos into the U.S.
- **LIFE**
▶ It doesn't get better than this rich, cheesy French onion soup
- **NEWS**
What drives Donald Trump? Fear of losing status, tapes show

GLOBE UNLIMITED **SALE** American politics. Canadian perspective. **\$1.99** per week for the first 10 weeks Offer Ends In: **5** DAYS **11** HOURS **37** MINUTES **20** SECONDS **GET IT TODAY**

TRENDING [Real Estate](#) | [Samsung](#) | [Marijuana](#) | [Carbon Tax](#) | [OPEC](#) | [Federal Reserve](#) | [Gold](#) | [Loonie](#)

Meet 'ROSS,' the bankruptcy robo-lawyer employed by some of the world's largest law firms



DREW HASSELBACK | August 9, 2016 1:52 PM ET
More from Drew Hasselback



Republish
Reprint



"Our goal is to have Ross on the legal team of every lawyer in the world," says Andrew Arruda, CEO and co-founder of ROSS Intelligence. Michael Short/Postmedia

Like 716 | Share | [Twitter](#) | [Google+](#) | [LinkedIn](#) | [Email](#) | [Typo?](#) | [More](#)

ROSS is barely three years old, doesn't wear suits, and hasn't graduated from university with a law degree, but he — or really, it — has already been hired by several of the world's largest law firms.

ROSS is an artificially intelligent computer system that was a few years ago developed by Andrew Arruda, Jimoh Ovbiagele, and Pargles Dall'Oglo at the University of Toronto as a plain-language legal research tool. ROSS was originally a submission in a global competition in which IBM challenged 10 universities to come up with commercial uses for its "Watson" artificial intelligence platform.

[Find a Story](#) [Stock Search](#)

FP Picks

Why Trump will win if he loses the election



FP's Larysa Harapyn speaks to James Rubec and Allan Bonner about Trump, his brand and the election

CETA is dead? Long live CUKTA. How Canada can save the best of CETA with a U.K. trade deal



Andrew Lilico: The EU has got itself to a place where it finds it very difficult to make any international trade agreements

Midas Letter in Argentina: A new sense of optimism and a big bet on lithium



Midas Letter editor James West reports from Argentina on the new sense of optimism among CEO's who have staked their companies' futures on the lithium-ion battery revolution

The Drive: Harry Rosen answers the age old question — boxers or briefs?



FP's Larysa Harapyn speaks with Canadian menswear legend Harry Rosen, on the heels of receiving the FGI Toronto Fashion Visionary Award

Defiantly independent: Home Hardware CEO Terry Davis stares down his U.S. competitors



Home Hardware chief executive Terry Davis says the company is staying true to its rural roots and is undaunted by Home Depot, or Lowe's

legal prediction

v.

answering legal questions

v.

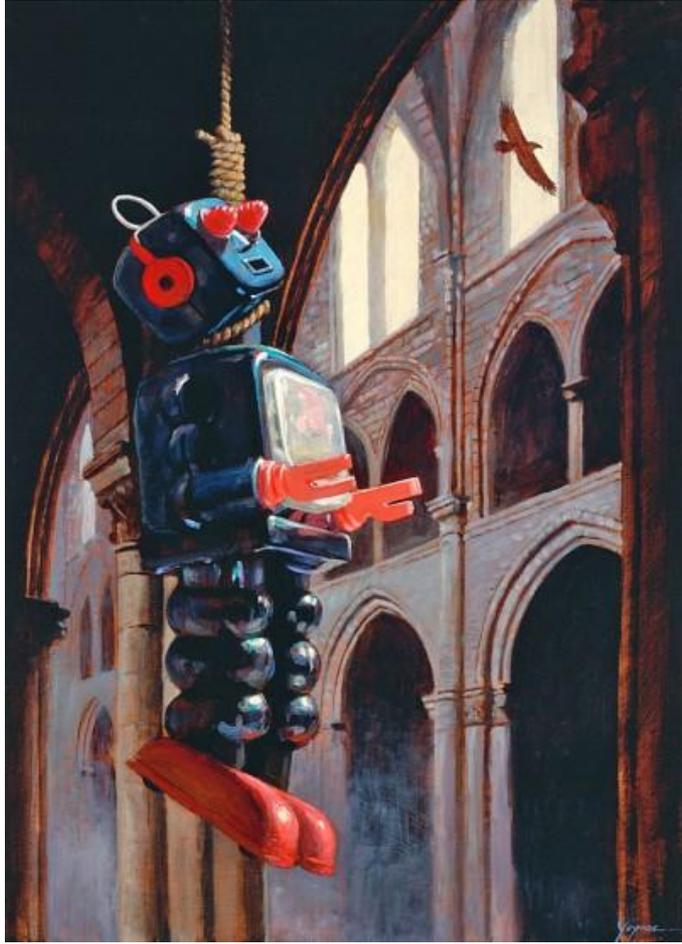
advising clients

v.

deciding a case

GDPR article 22

The data subject shall have the **right not to be subject to a decision based solely on automated processing**, including profiling, which produces legal effects concerning him or her or similarly significantly affects him or her.

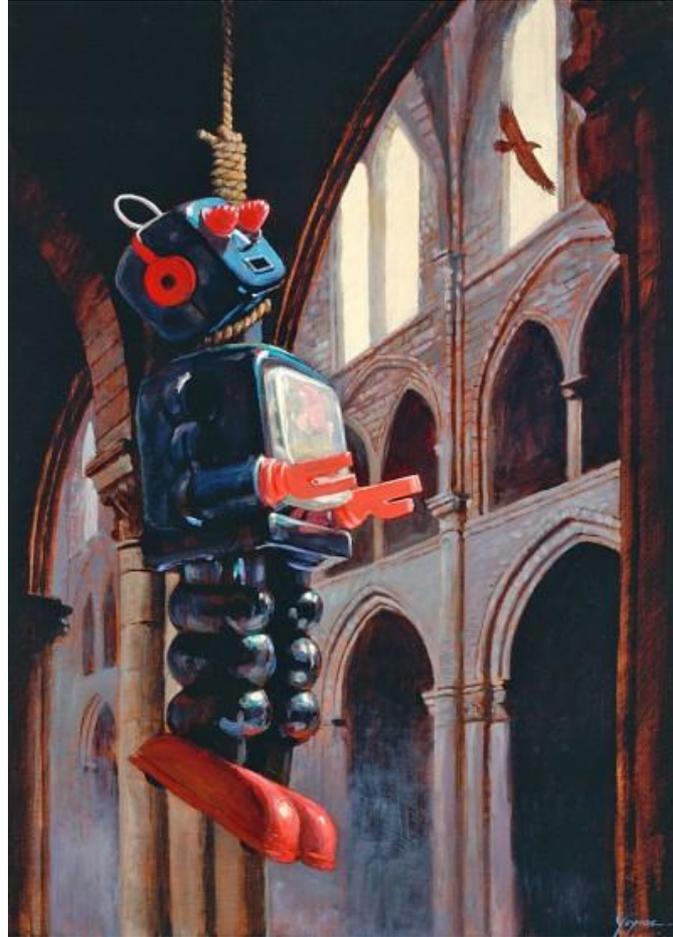


rule-following behaviour // following a rule

machine learning is non-normative

internal/external **point of view**

computational law and its enmities



@ianrkerr

canada research chair in ethics, law & technology
university of ottawa