QNA Markup Robotics

Online Dispute Resolution

Al, Automation & the Law

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The changing world of Law

Other LawTech

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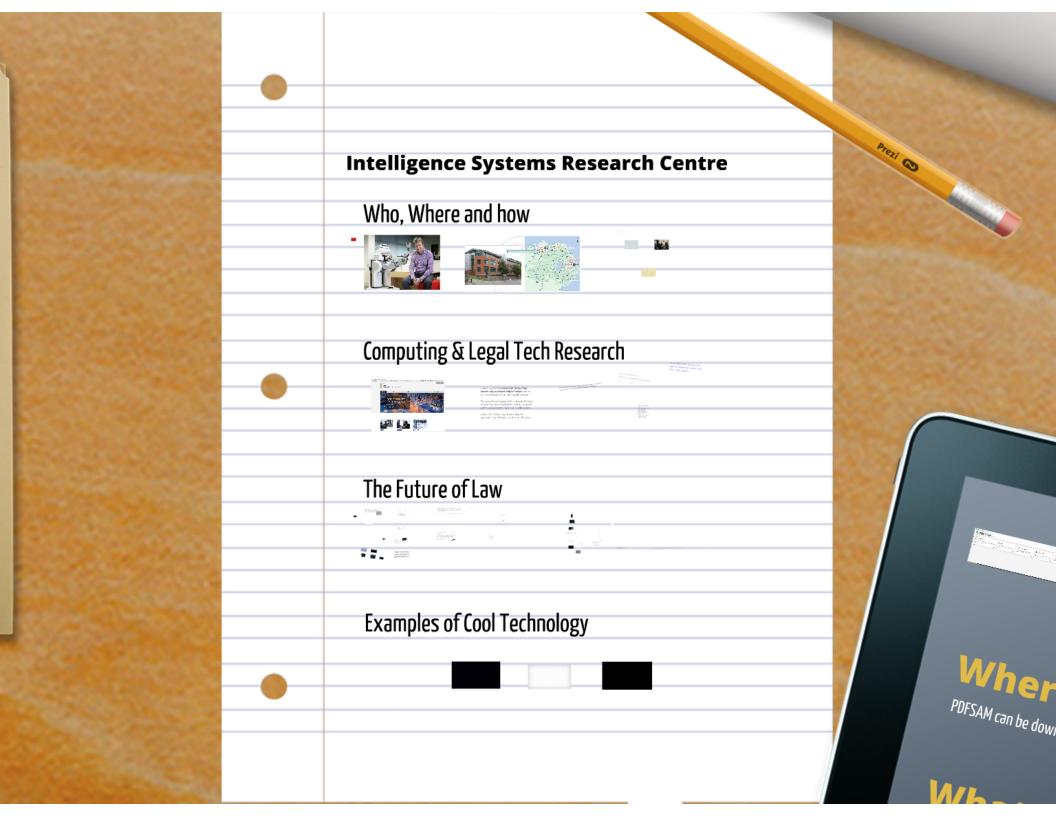
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#### Intelligence Systems Research Centre

#### Who, Where and how









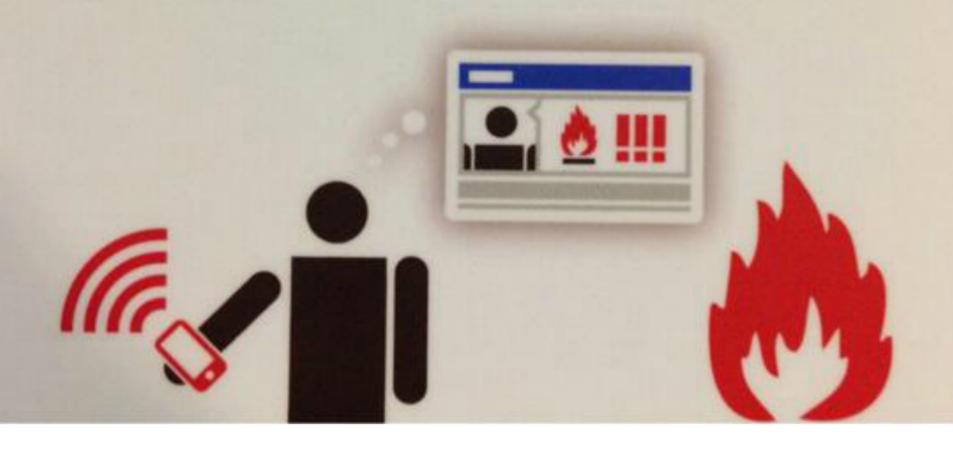


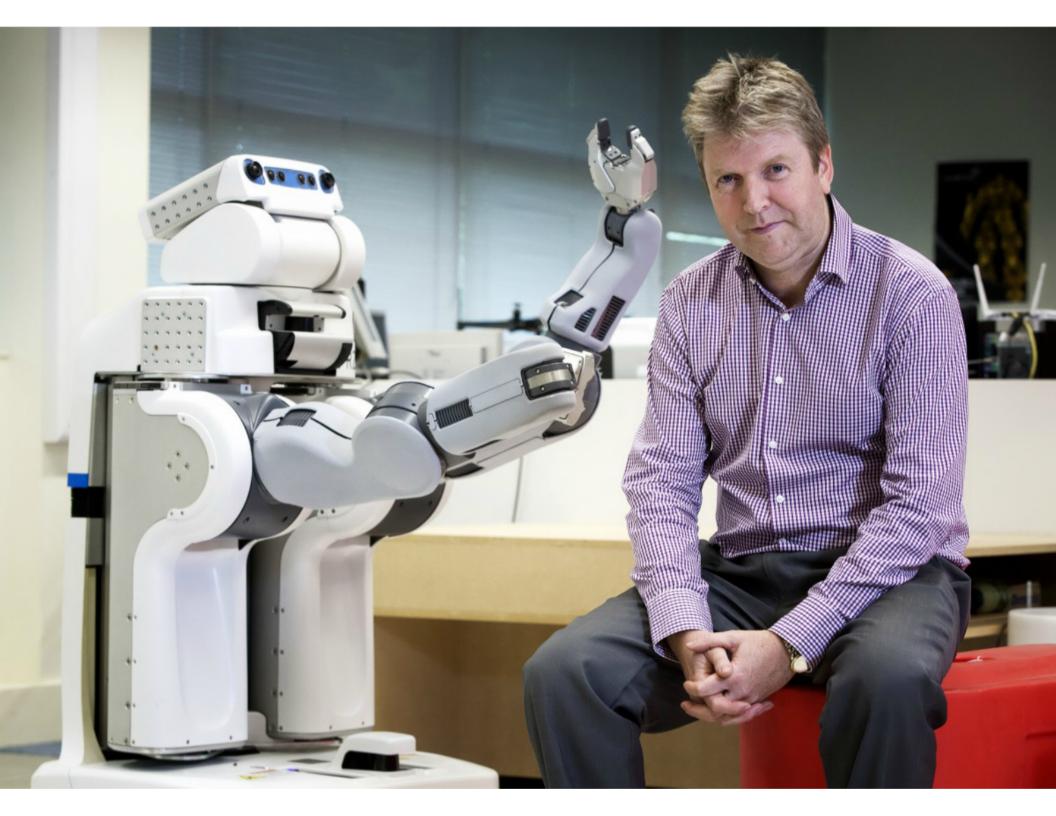
#### Computing & Legal Tech Research

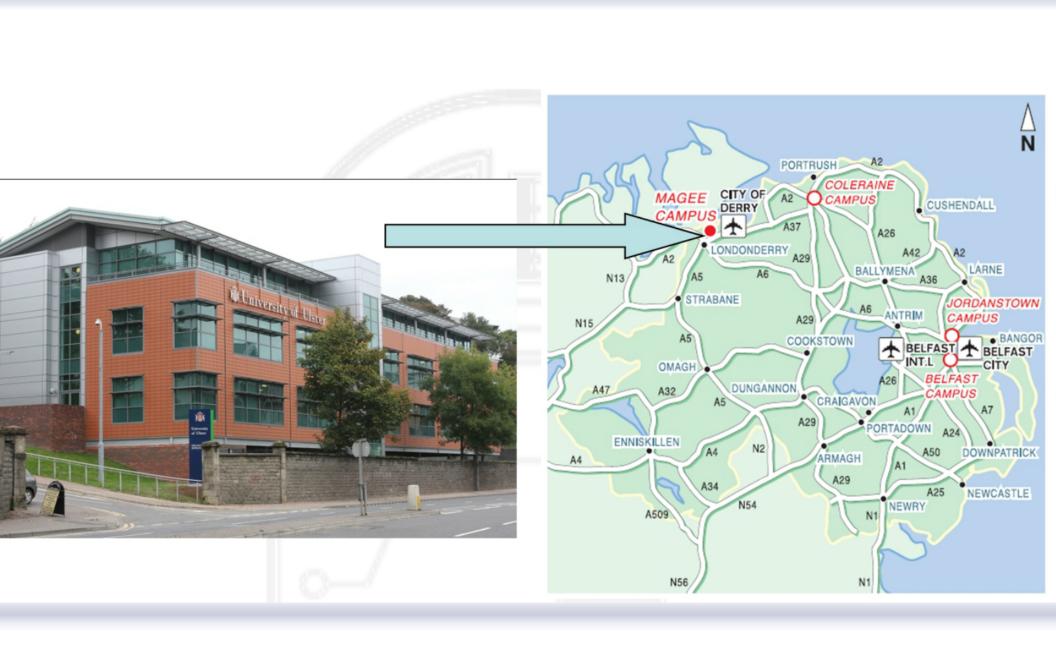
Did you know Ollster University is the largest university on the island of heland with > 27,000 students...

#### IN CASE OF FIRE:

Please leave the building before posting it on social media.



















### Computing & Legal Tech Research



A current project is that automated fact checking of legal documents using computational intelligence techniques where the aim is to extract and worldy each fact in specific legal texts.

This research will create language models for addressing information Extraction from texts in the legal domain combined with external publically accessible obcurrent sibs in order to verify statements.

Automatic fact checking of legal documents allows for improvements in legal information retrieval system effectiveness. No are in the top and of the universities for received power in computer the are the top and are received ledge amounted as variableading.

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#### The Future of Law























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**About** 

Courses

Research

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We are in the top 25% of UK universities for research power in Computer Science, with 65% of our research being assessed as world-leading.

Law at Ulster was ranked 4th (of 67) in UK.

Ranked first for impact, with 100% of research impact rated as world leading



Did you know? Ulster University is the largest university on the island of Ireland with > 27,000 students.....

#### My life as an expert witness.....

- Offensive Material (Dark Web...going blind)
- Preacher of hate
- Offensive Material (Laptop not shared)
- Paramilitary DVR CCTV
- Neighbour on craigslist
- Google v famous political figure
- Google v person in jail
- Under 16 (saddest)
- Diary farmer (why you should do it)
- Terrorist (YouTube footage)
- Twitter (Flag Offensive Posts)



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#### The Future of Law





#### **Examples of Cool Technology**

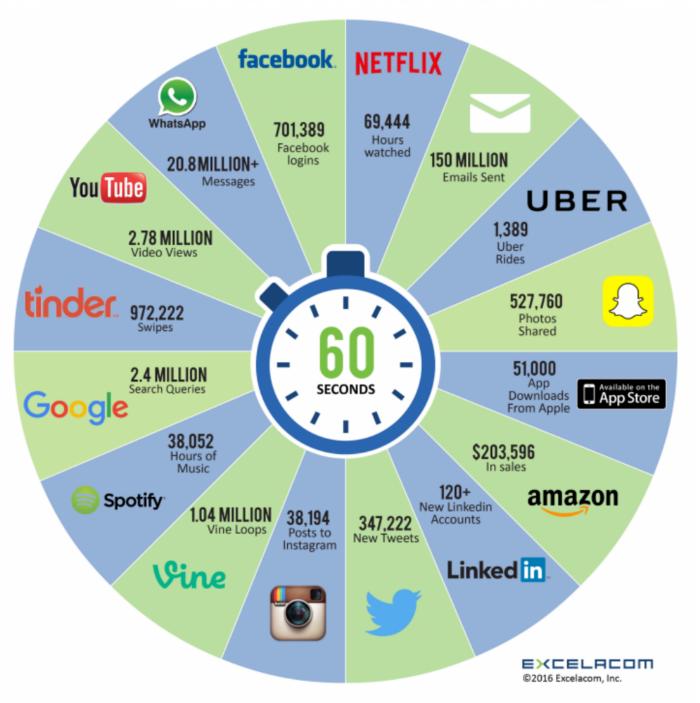
Technology is pervasive in almost every aspect of daily life, and as the workplace changes, IT knowledge and skills grow in importance for everyone.....

1990s 2010s





## 2016 What happens in an INTERNET MINUTE?

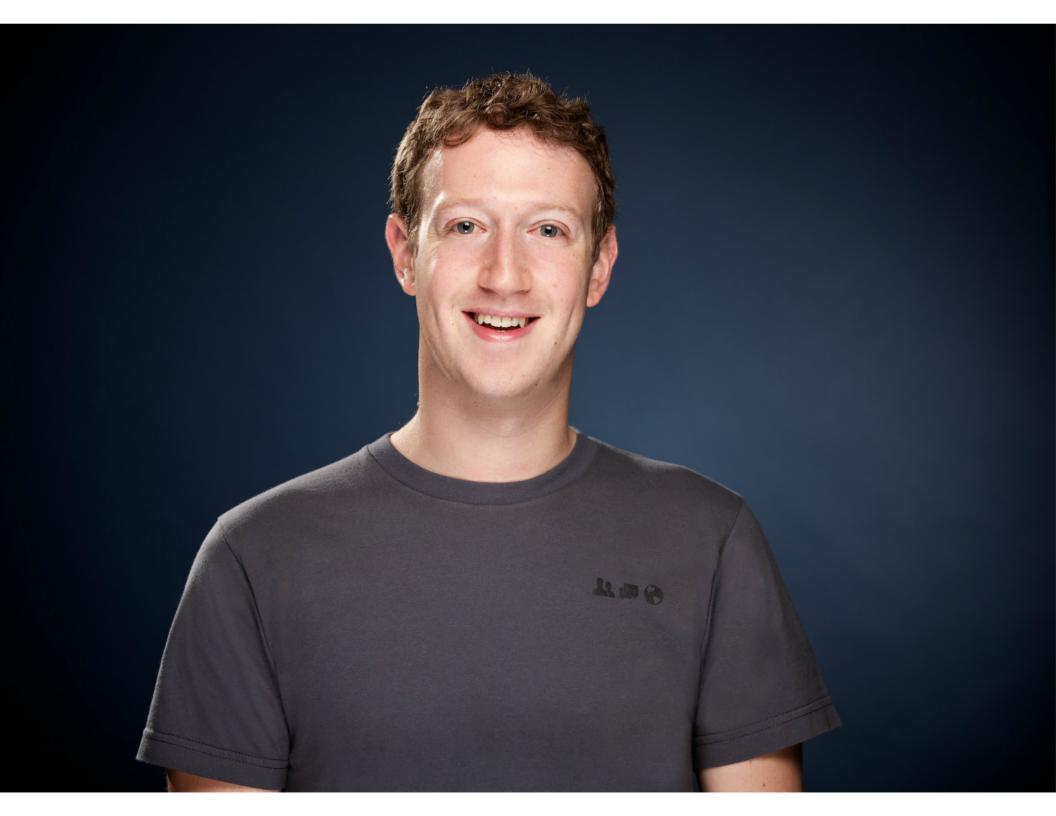


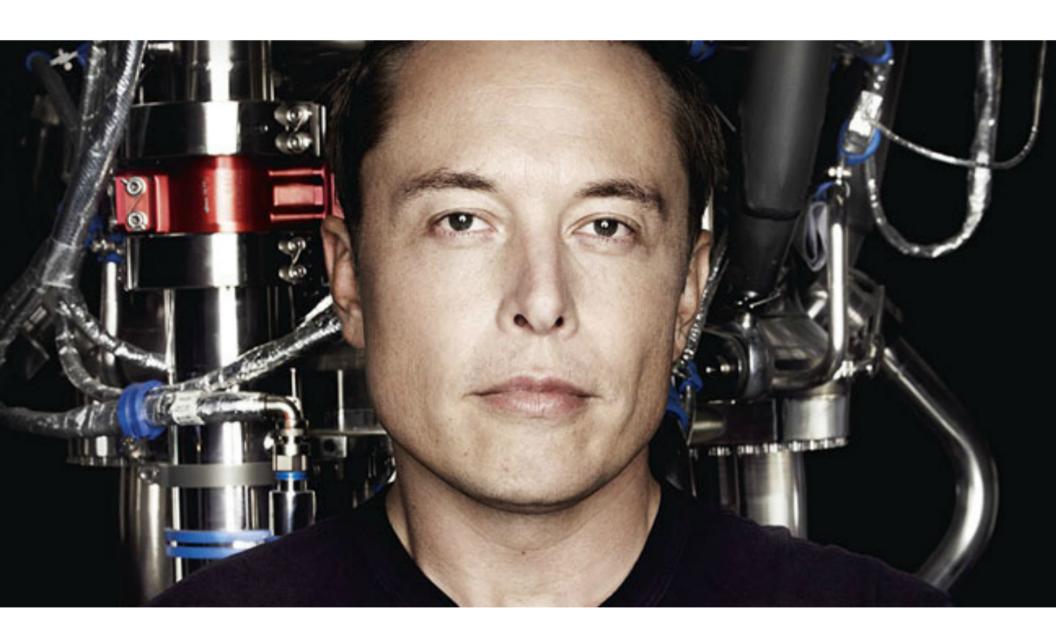
# Which Computing people do you know?











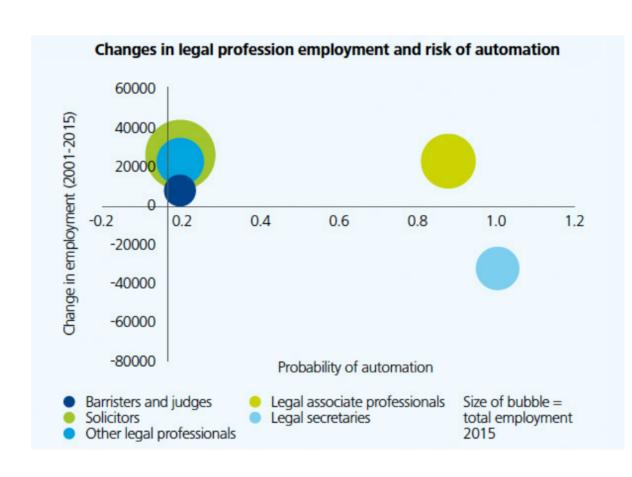


- A generation of lawyers in practice today who started practising law before the word-processor, the telefax and the e-mail.
- They now meet and deal with lawyers born in the digital age aka "Digital Natives".
- · The old ways of doing things have changed and the old ways of learning are gone.
- Digital Natives are used to the instantaneity of hypertext, are networked most of their lives, are used to receiving information quickly & "multi-tasking".
- Technology has been the single factor that has vastly altered the shape of commerce in modern times, and that in turn has altered legal practice.



g. In the US, the financial crisis in 2008 had a evere impact on the legal profession. The general icture since has been one of downsizing, with laying ff of non-partners and general staff ......although eartner profitability remained largely stable.

his has led to serious examinations of the way law spractised there, especially in the large firms.....more on-partners



- · A major driver of change is IT.
- · There is now a relentless connectivity which links
- · clients to lawyers and lawyers to each other.



Online facilities for e-learning may see growth in an area that not many may
welcome - the informed client. Patients who surf the net sometimes appear more
knowledgeable than their doctors.

If legal services can be delivered online in respect of basic procedural and substantive issues, law firms will be freed to advise on more complicated and complex matters.

Basic legal advice online is only one aspect of future legal services. e.g. odr, e-mediation and e-negotiation - for resolving disputes.

Traditional courts may also change once IT makes virtual courts plausible, with litigants, legal advisers and judges all connected online in the same proceedings.

As legal services turn online, there will also be a demand for lawyers who have skills in "modern techniques of standardisation and computerisation" and can provide legal technical and technological support.

There is thus room for a true legal technologist - a person qualified in both law & IT

Law schools today are training the lawyers to be 20th century lawyers, not 21st century ones.

Contract, tort, constitutional law and legal method are essential curricula, but we need law schools to conduct courses that will equip young lawyers to perform the kind of legal work that will be in demand in coming years.

....that is the aim of LIC short courses.....



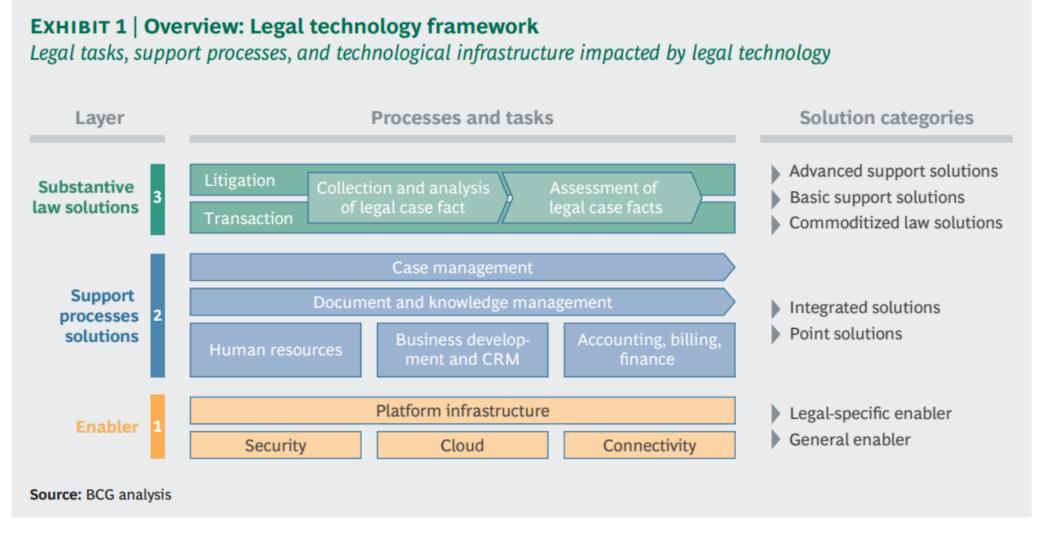
The volume of data used in legal advice has increased exponentially e.g in the Enron case, lawyers have had to review hundreds of thousands of e-mails and other documents to establish the facts.

The ability to screen, analyze, and interpret unprecedented volumes of data will become just as critical to law firms' success

The Boston Consulting Group suggest that legal-technology solutions could perform as much as 30-50 percent of tasks carried out by junior lawyers today.

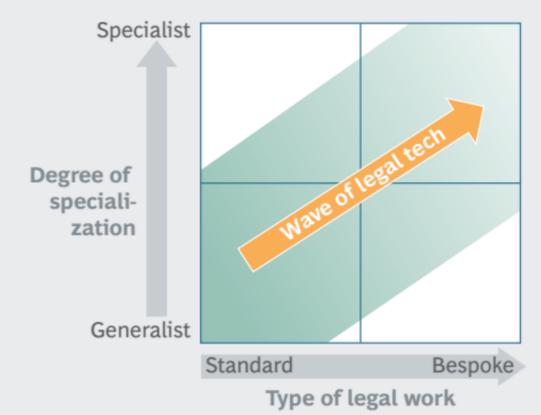
Law firms that fail to take advantage of legal technology risk losing corporate clients to more forward-thinking law practices, at best.

- The legal-tech landscape can be divided into three broad categories of technology solutions.
- 1. Enabler technologies focused on facilitating digitization such as cloud storage tools and cybersecurity solutions
- 2. Support-process solutions infuse new efficiencies into law firms' case-management and back-office work, in processes ranging from human resources management and business development, CRM, accounting, billing, and finance.
- 3. Substantive law solutions support or even replace lawyers in the execution of core legal tasks in transactions and litigation cases. e.g. basic support solutions, facilitates the execution of low-skilled legal tasks, such as the drafting of standard letters or deadline control, or helps automate repetitive tasks, including simple contract drafting & contract analysis.



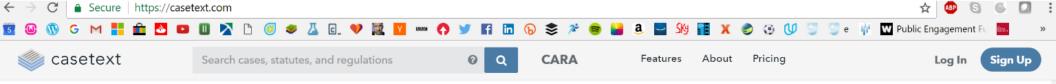
# EXHIBIT 2 | Legal tech has started with automating standard legal tasks —but it will not stop there

Development direction of legal tech



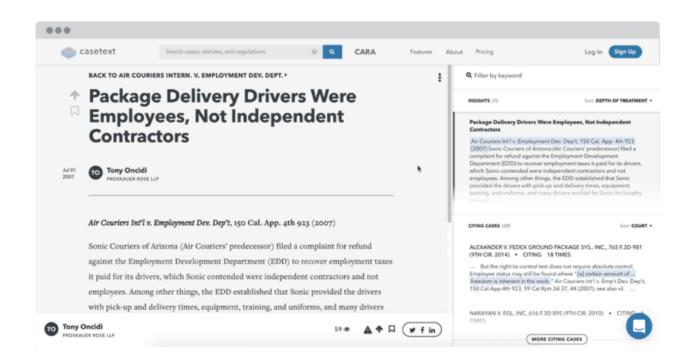
Source: BCG analysis

# Legal Tech Companies

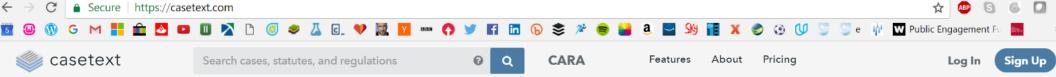


#### Meet CARA, your automated research assistant.

Simply drop a brief into CARA's secure system, and CARA's machine learning and AI technology will immediately go to work, researching Casetext's entire database of U.S. law and surfacing relevant case law in milliseconds.

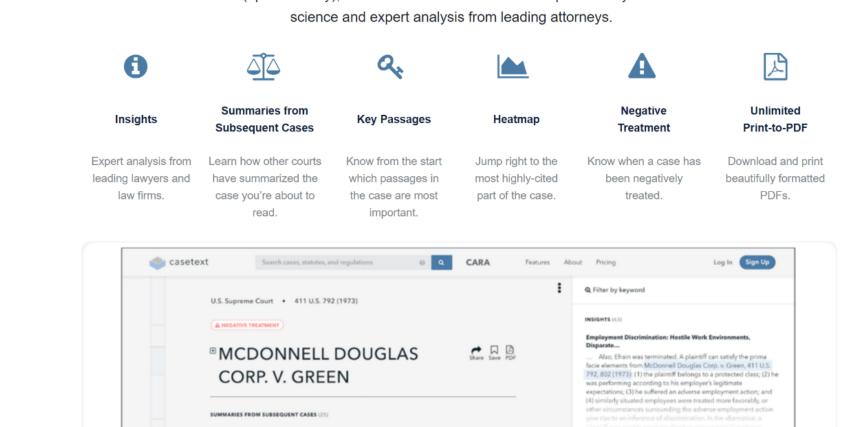


With CARA, you don't miss important cases, you catch the cases opposing counsel left out, and you research faster so you can focus on providing best-in-class legal services for your clients.



#### Be a better, faster researcher.

Research with CARA is backed by a comprehensive legal database (updated daily), with a suite of advanced features powered by data science and expert analysis from leading attorneys.



MORE INSIGHTS

... After being demoted and ultimately discharged, Hicks filed suit, alleging that these actions had been taken because of his race

in violation of, inter alia, § 703(a)(1) of Title VII of the Civil Rights Act of 1964. Adhering to the allocation of the burden of production

discriminatory treatment cases that was established in McDonnell Douglas Corp. v. Green, 411 U.S. 792, the District Court found that

and the order for the presentation of proof in Title VII

ST. MARY'S HONOR CENTER V. HICKS, 509 U.S. 502 (1993) .

CITING CASES (37680)

CITING 63 TIMES

"Holding in employment discrimination case that statistical evidence of employer's general policy and practice may be relevant circumstantial evidence of discriminatory

MORE SUMMARIES

nondiscriminatory reason for the employee's rejection. We need not attempt in the

instant case to detail every matter which fairly could be recognized as a reasonable

"The burden then must shift to the employer to articulate some legitimate,

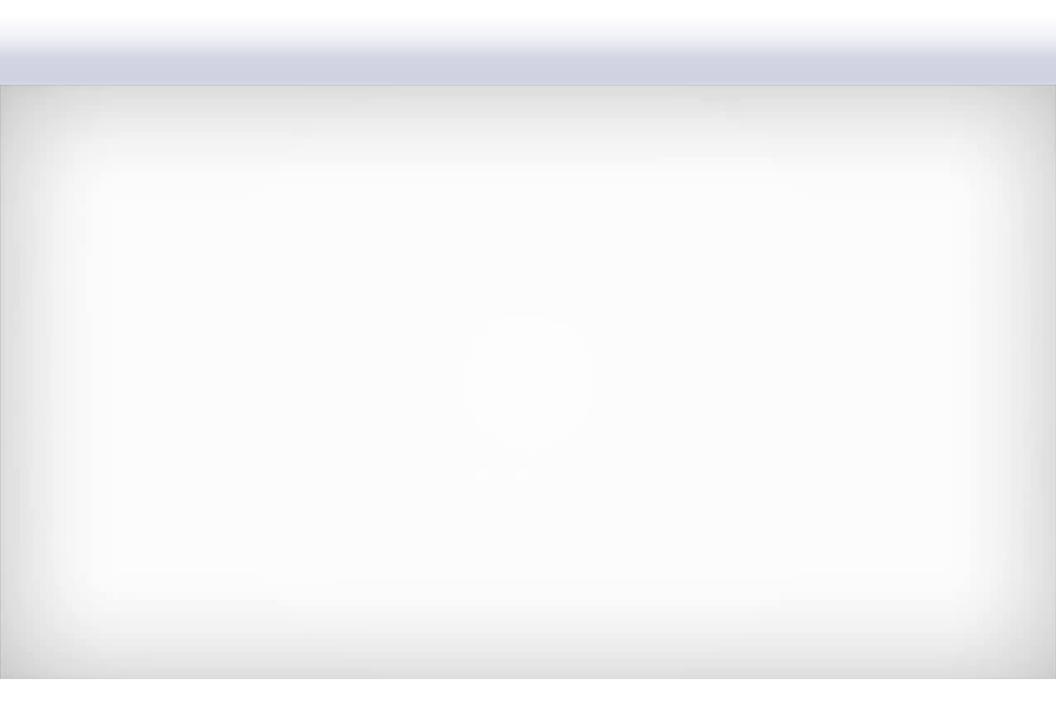
intent behind individual employment decision"

Burnett v. Miller. No. 14-7069 (10th Cir. Nov. 20, 2015)

KEY PASSAGES FROM THIS CASE [45]



# **Examples of Cool Technology**



## Artificial Intelligence e.g. Machine Learning/Deep Learning

Artificial intelligence (Al) - basically: what people can and computers can't (yet) do

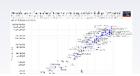
Deep Al: general purpose intelligence (cf. the Terminator movies)

Shallow Al: task-specific intelligence (this is where the action is for us in law)

Turing test - the most (but not very) agreed-upon validation experiment for deep Al - a number of people have to carry a conversation with a person and a computer without knowing (or the setup revealing) which is which and >30% have to get it wrong - "passed" by "Eugene Goostman" in 2014 (by lowering expectations by claiming to be a 13- y.o. non-native speaker of English)

The Singularity - the moment when the computing power of all computers combines exceed that of humankind - depending on who you believe, the beginning of the total annihilation of humanity or total eternal bliss

Moore's Law - the observation that transistor density in an integrated circuit doubles every ~2 years (Gordon E. Moore, co-founder of Intel, in 1965) - has enabled the exponential growth of computer processing capacity - likely to slow down soon

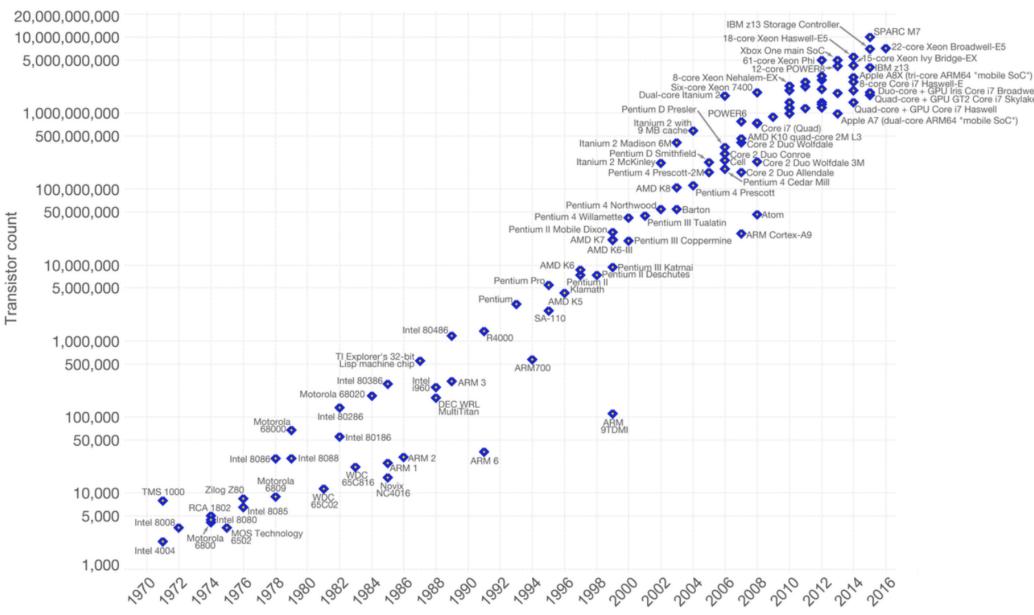




## Moore's Law – The number of transistors on integrated circuit chips (1971-2016)

Our World in Data

Moore's law describes the empirical regularity that the number of transistors on integrated circuits doubles approximately every two years. This advancement is important as other aspects of technological progress – such as processing speed or the price of electronic products – are strongly linked to Moore's law.





A 22nm transistor can switch on and off well over 100 billion times in one second. It would take you around 2,000 years to flick a light switch on and off that many times.<sup>5</sup>



It's one thing to design a tri-gate transistor but quite another to get it into high volume manufacturing. Intel's factories produce over 5 billion transistors every second. That's 150,000,000,000,000,000 transistors per year, the equivalent of over 20 million transistors for every man, woman and child on earth.

## OK, so what is it all about?

Machine learning is programming computers to optimize a performance criterion use. There is no need to "learn" to calculate payroll

## OK, so what is it all about?

Machine learning is programming computers to optimize a performance criterion using example data or past experience. There is no need to "learn" to calculate payroll

#### Learning is used when:

- · Human expertise does not exist (navigating on Mars),
- · Humans are unable to explain their expertise (speech recognition)
- Solution changes in time (routing on a computer network)
- · Solution needs to be adapted to particular cases (user biometrics)

#### What we talk about when we talk about learning

- · Learning general models from a data of particular examples
- · Data is cheap and abundant (data warehouses, data marts); knowledge is expensive and scarce.
- Example in retail: Customer transactions to consumer behavior: People who bought "Da Vinci Code" also

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- Example in retail: Customer transactions to consumer behavior: People who bought "Da Vinci Code" also bought "The Five People You Meet in Heaven" (www.amazon.com)
- · Build a model that is a good and useful approximation to the data.

### Knowledge Data Mining

KDD is the non-trivial process of identifying valid, novel, potentially useful, and ultimately understandable patterns in data.

• Retail: Market basket analysis, Customer relationship management (CRM)

## Knowledge Data Mining

KDD is the non-trivial process of identifying valid, novel, potentially useful, and ultimately understandable patterns in data.

- · Retail: Market basket analysis, Customer relationship management (CRM)
- · Finance: Credit scoring, fraud detection
- · Manufacturing: Optimization, troubleshooting
- · Medicine: Medical diagnosis
- · Telecommunications: Quality of service optimization
- · Bioinformatics: Motifs, alignment
- · Web mining: Search engines

- MCD LIMITIAN OCOLOH CLIMILES

#### What is Machine Learning?

Machine Learning is the study of algorithms that improve their performance at some task with experience

Optimize a performance criterion using example data or past experience.

Role of Statistics: Inference from a sample

Role of Computer science: Efficient algorithms to

- · Solve the optimization problem
- · Representing and evaluating the model for inference

## Growth of Machine Learning

## Growth of Machine Learning

Machine learning is preferred approach to

- · Speech recognition, Natural language processing
- Computer vision
- · Medical outcomes analysis
- Robot control

This trend is accelerating

- · Improved machine learning algorithms
- · Improved data capture, networking, faster computers
- · Software too complex to write by hand
- · New sensors / 10 devices
- · Demand for self-customization to user, environment

## Learning Associations

Basket analysis:

 $P\left(Y\mid X\right)$  probability that somebody who buys X also buys Y where X and Y are products/services.

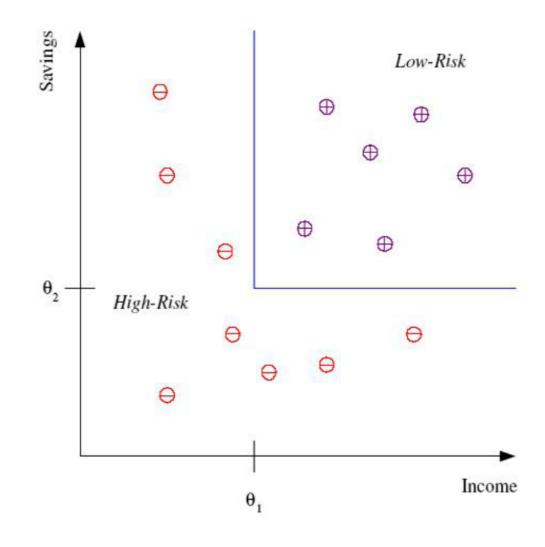
Example: P (chips | beer ) = 0.7

#### Market-Basket transactions

TID	Items
1	Bread, Milk
2	Bread, Diaper, Beer, Eggs
3	Milk, Diaper, Beer, Coke
4	Bread, Milk, Diaper, Beer
5	Bread, Milk, Diaper, Coke

## Classification

- Example: Credit scoring
- Differentiating between low-risk and high-risk customers from their income and savings



Discriminant: IF  $income > \theta_1$  AND  $savings > \theta_2$  THEN low-risk ELSE high-risk Model

## Classification: Applications

- Aka Pattern recognition
- · Face recognition: Pose, lighting, occlusion (glasses, beard), make-up, hair style
- Character recognition: Different handwriting styles.
- · Speech recognition: Temporal dependency.
- · Use of a dictionary or the syntax of the language.
- · Sensor fusion: Combine multiple modalities; eg, visual (lip image) and acoustic for speech
- Medical diagnosis: From symptoms to illnesses
- · Web Advertising: Predict if a user clicks on an ad on the Internet.

## Supervised Learning: Uses

Example: decision trees tools that create rules

- · Prediction of future cases: Use the rule to predict the output for future inputs
- · Knowledge extraction: The rule is easy to understand
- · Compression: The rule is simpler than the data it explains
- · Outlier detection: Exceptions that are not covered by the rule, e.g., fraud

## Intelligence Augmentation & Al

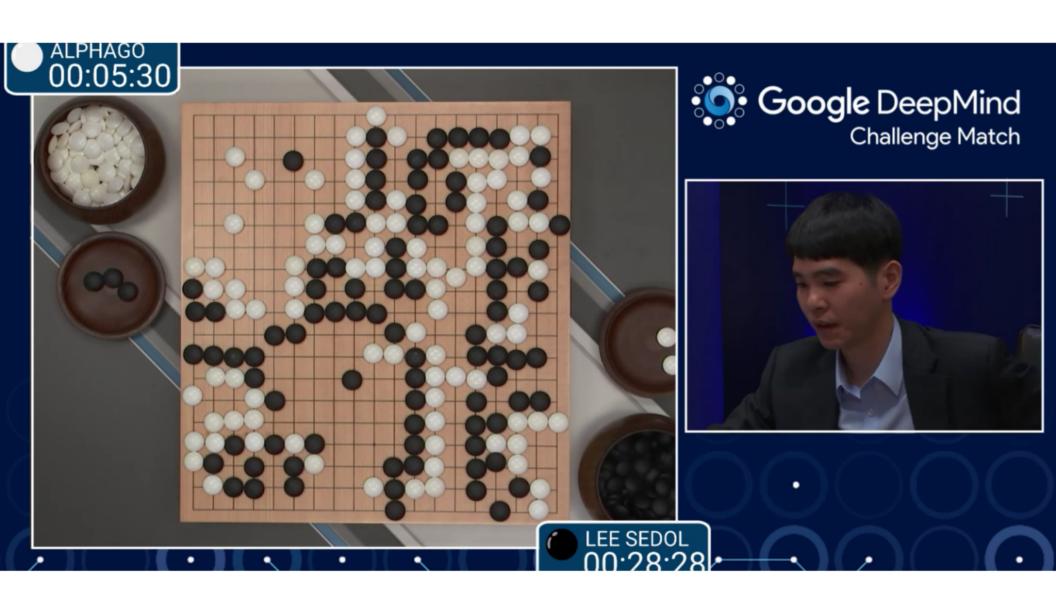
Automatic understanding of a text by a computer. In the case of argumentative text, this includes automatically determining the underlying argument structure. Getting a computer to do this automatically has many applications, including:

Automatic summarisation. A first step towards automatically summarising an argumentative text is to determine its argumentative structure. In particular, for summarisation it is important to know what the main claim in the text is and which statements are directly supporting or opposing this claim.

Flexible information presentation. Once the argument that underlies a text has been identified, this provides a basis for taking that argument and presenting it in different ways. For instance, a text is not always the most engaging and memorable way to make a point. What if we could transform that text automatically into a conversation/dispute that is played out by computer-animated characters?

DIFFICULTY OF VARIOUS GAMES FOR COMPUTERS				
SOLVED COMPUTERS CAN PLAY PERFECTLY	SOLVED FOR ALL POSSIBLE POSITIONS	TIC-TAC-TOE  NIM  GHOST (1989)  CONNECT FOUR (1995)		
	Solved For Starting Positions	(GOMOKU) (CHECKERS) (2007)		
COMPUTERS CAN BEAT TOP HUMANS		GCRABBLE  (COUNTERSTRIKE)  REVERSI BEER PONG (UILC ROBOT)  (CHESS)  (FEBRUARY 10, 1996: FIRST WIN DY COMPUTER AGAINST TOP HUMAN NOVEMBER 21, 2005 LAST VIN BY HUMAN AGAINST TOP COMPUTER  (JEOPARDY!)  (CTADOODET)		
COMPUTERS STILL LOSE TO TOP HUMANS (BUT FOCUSED RED COULD CHANGE THIS)		POKER  ARIMAA  GO		
COMPUTERS MAY NEVER OUTPLAY HUMANS		SNAKES AND LADDERS  MAO  SEVEN MINUTES IN HEAVEN  CALVINBALL		







Artificial Intelligence is the wider field in which Deep learning is a subset.

Deep learning itself is a subset of machine learning. Artificial intelligence applies to a broader range of concepts. To achieve many forms of artificial intelligence however there needs to be autonomous 'thinking' and machine learning techniques like deep learning are a manner in which to achieve that independence.

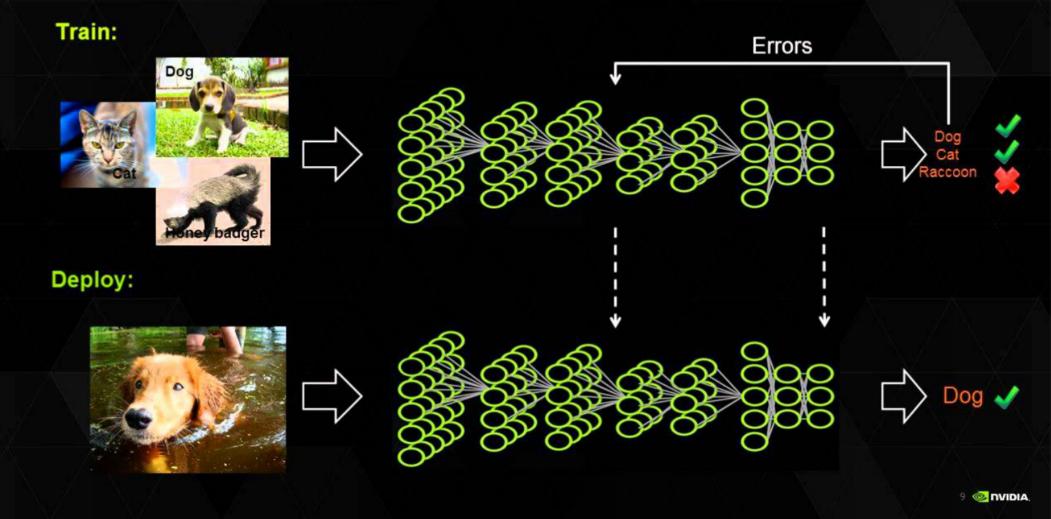
Deep learning is a technique where data is fed into a system which tries to model itself on how we believe our brain works with regards the neural pathways.

If you imagine a series of links where decisions are made depending on the importance 'weight' assigned to a decision then by 'chaining' these decisions together, a computer can arrive at what is the best decision at that instant in time.

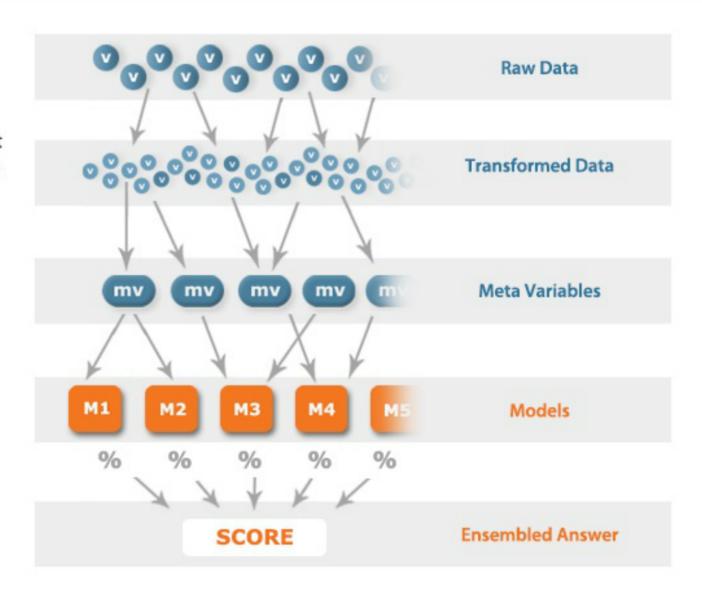
Of course, the best decision is usually traced back to previous examples which it has already looked at so it knows when it has made a decision by looking through its memory.

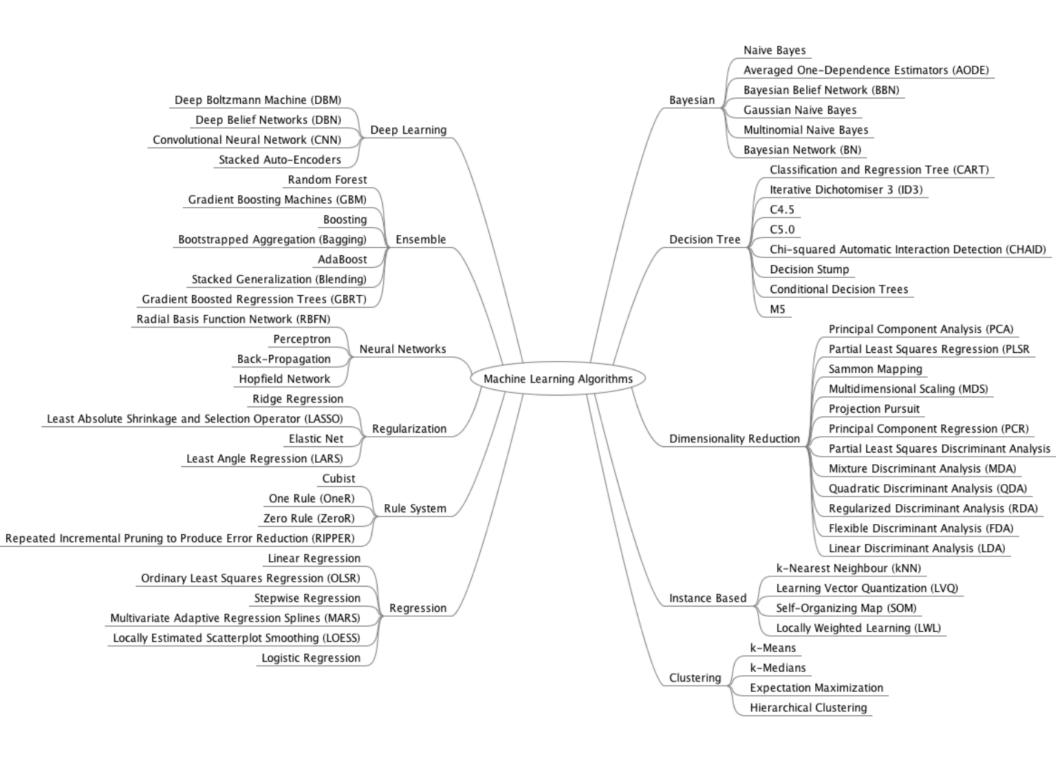
It really comes into its own when it has lots of previous examples and much of the decisions that are made in this deep neural network are being made autonomously by the computer but we as humans are able to compare test cases to see how good the overall deep learning decisions are.

## DEEP LEARNING APPROACH



- The model starts by considering thousands of variables.
- Model computes implicit relationships, transforms best variables into most useful form.
- Transformed variables are combined into meta-variables describing specific aspects of a borrower.
- Meta-variables are fed into different models, each with a different "skill."
- Each model "votes", scores ensembled for a final decision.

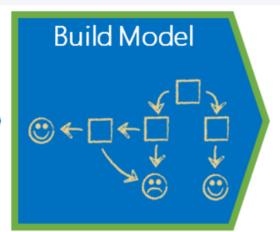




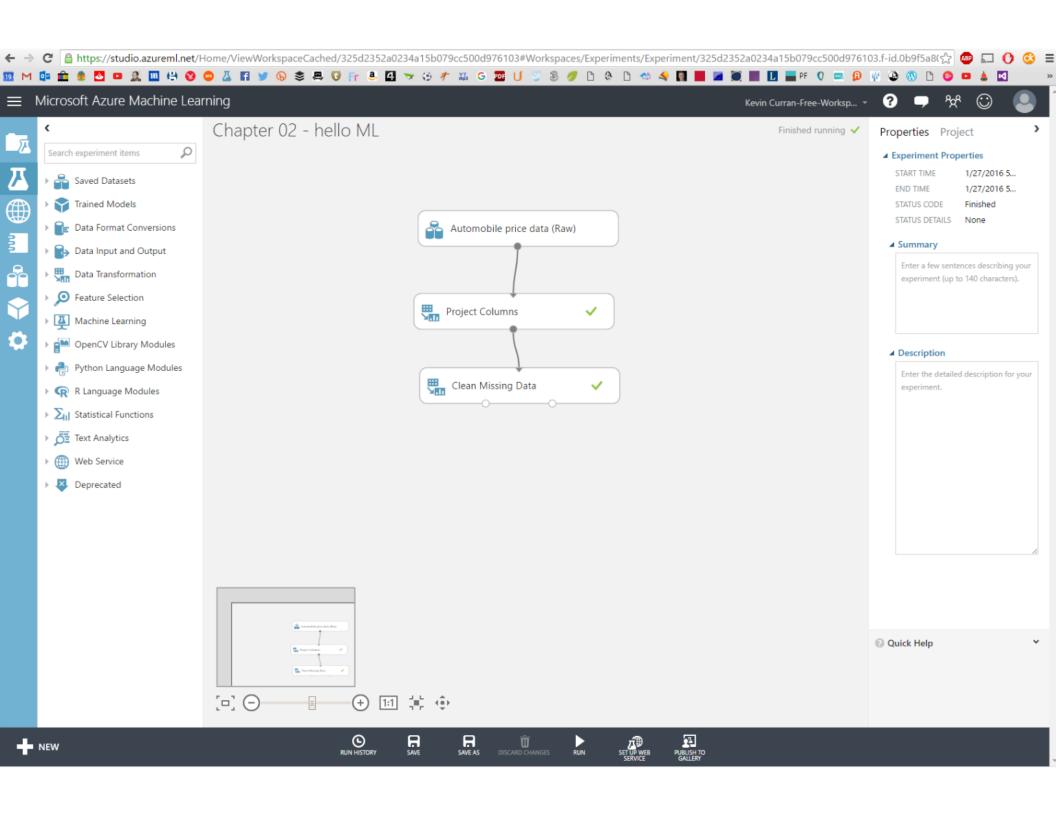




$$\begin{bmatrix} X + Y = Z \\ A + B = C \\ X + A = Z \\ B + Y = ? \end{bmatrix}$$







Deep Learning is achieving excellent results also in fields such as computer vision, automatic speech recognition, natural language processing, audio recognition and bioinformatics where they have been shown to produce state-of-the-art results on various tasks.

The IT giants such as Google, Microsoft, Facebook and others have all been using deep learning techniques in research projects.

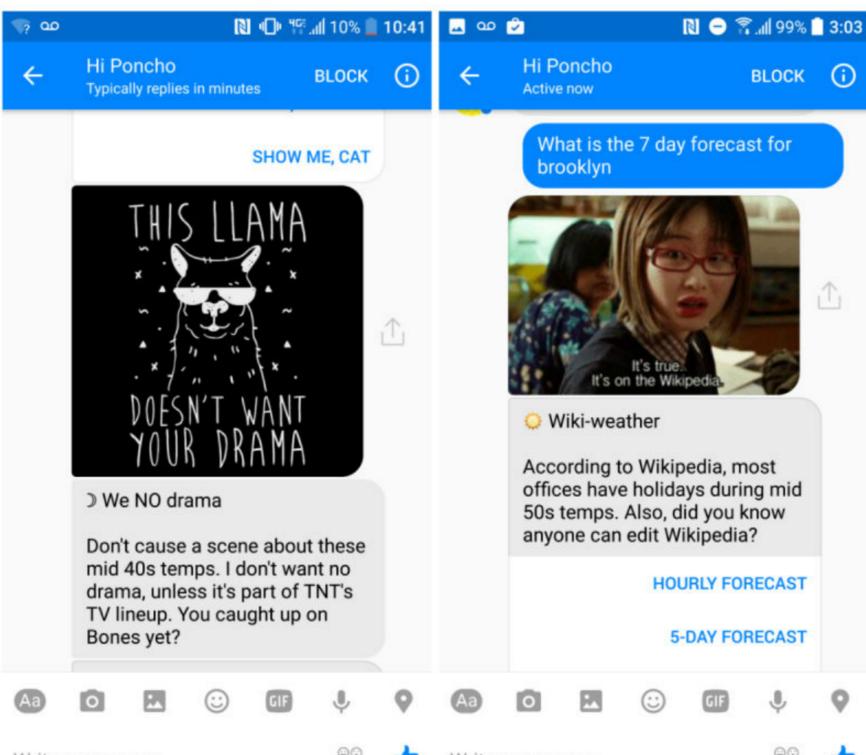






Deep learning can be applied in any adversarial problem or something which can be conceived of as a game, where strategy matters. This includes business, war or financial trading.

In the shorter term it could be applied in areas such as smartphone assistants but in the longer term, it could help scientists tackle some of society's toughest problems such as climate modelling, healthcare and disease analysis or more responsive robots.









## Robotics

#### **Cool Robotics**





**Boston Dynamics Spot** 

Incredibly harder to do than it looks.



**Boston Dynamics Handle** 

Clever robot to make it easy to maneuver



**Boston Dynamics Atlas** 

Another of the great robots from Boston Dynamics.





**Boston Dynamics Atlas** 

The evolution of Atlas

#### So, we can ask....Will Robots Steal Your Legal Job?

Imagine you've been served with a legal complaint. Your startup company makes a very popular widget...What do you do?

There's no easy answer. The legal industry is one of the few remaining outposts of the corporate world whose operations are dictated mainly by human experience.

Basic questions that anyone would want to know before committing to a million-dollar case—How likely is it that I'll win? How good are my lawyers? Should I settle?—can't be answered with certainty.

There's a culture in the law around expertise. There's a lot of human intuition, and people tend to think that whatever legal knowledge they have is uniquely human, and not subjectable to data and computers and automation.

Computers can help however in the form of "quantitative legal prediction."

Hundreds of thousands of patent cases are filed every year. There's a good chance, then, that MicroWidget's case against you shares some similarities with a bunch of those other cases.

What if you could analyze the key features of MicroWidget's claim, and then see how thousands of comparable cases fared? "Lawyers will be able to say to their clients, 'Here's what we think your chances are—and based on 10,000 cases that are just like yours, here's what the computer thinks your chances are...

Automation will bring legal services to the masses.

Many people who ought to hire an law firm to handle business or personal disputes can't afford to do so. Software could potentially step in when you want to fight your mortgage lender, draw up contracts to start a small business, or sue for child-support payments.

Yes, laws are designed by human politicians and they're enforced by human authorities. When disputes arise, they're settled by human judges and juries.

Yet if you look at the tasks most lawyers perform each day, you find many that machines can handle. Language processing, grappling with complex logic, making predictions about situations involving several variables—computers are getting better at all of this stuff.

Consider that most pedestrian of legal tasks: writing up a business contract.

A solicitor might design thousands of contracts, many of which contain numbingly similar bits of language.

Now, several legal tech companies have created programs that build these documents automatically.

These pieces of software work a bit like TurboTax, asking a series of questions and using branching logic to delve deeper into specific areas.

E-discovery software has been similarly revolutionary.

These systems can mine huge volumes of material (like all the email correspondence in a civil suit) for damning evidence.

The simplest software looks for specific keywords, but more sophisticated systems can detect patterns of behavior that might interest lawyers.

This was the sort of work that once consumed the lives of first-year associates; now computers do it faster, at lower cost, and with about as much success as humans.

At the moment, human lawyers have one thing on their side: The legal world is generally suspicious of automation, and in some respects downright inhospitable to it.

Courts publish written decisions, but other data-like case filings and motions—are locked in databases....until that information is easier to extract, human lawyers will have an edge.

Lawyers shouldn't take comfort in today's imperfect databases and software.

Researchers are working on ways to extract and interpret historical data—one project e.g. Stanford created the Intellectual Property Litigation Clearinghouse, a project that tracks more than 100,000 patent and trademark lawsuits.

Spun-off to Lex Machina - the most comprehensive collection of patent suits ever assembled, and it has already helped overturn some bedrock beliefs in patent law.

For years, patent attorneys believed that courts in the Northern District of California tended to be friendly to defendants, while courts in the Eastern District of Texas favored plaintiffs—a line of thinking that routinely prompted lawyers to go venue shopping.

Lex-Machina showed that in the Northern District of California, plaintiffs were winning more on trial—the opposite of conventional wisdom.

Don't despair....you can argue that something like Lex Machina is designed to supplement human intelligence rather than replace it.

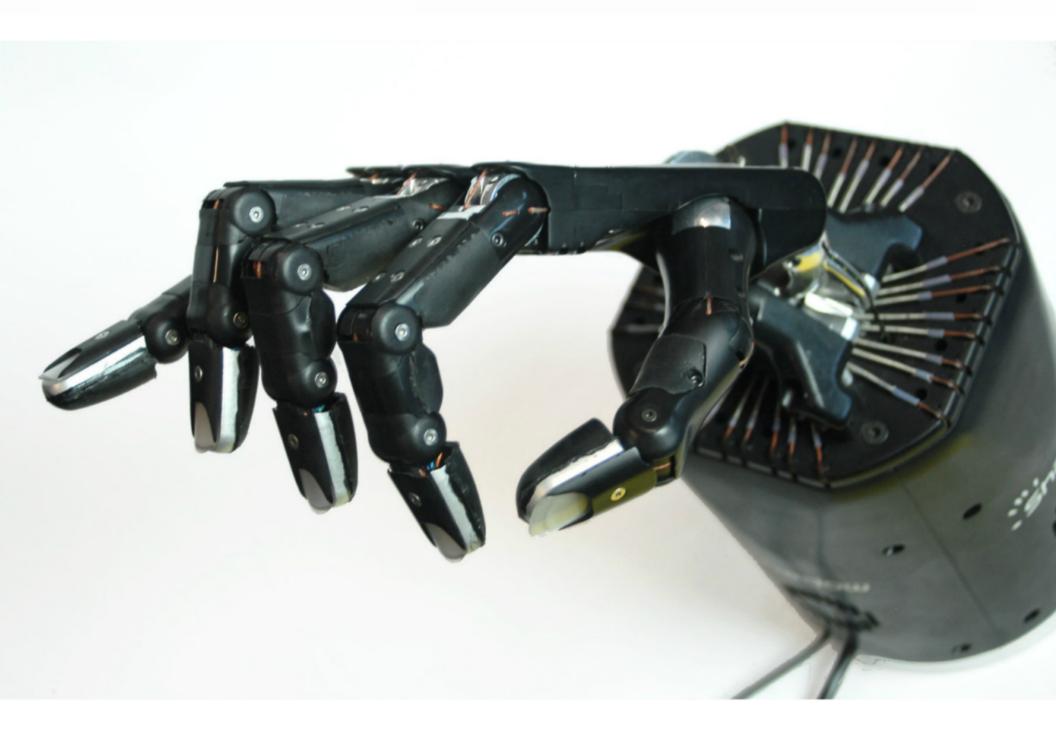
By augmenting humans, the database is making lawyers better at what they do.

Much of the work that computers are taking on is the stuff that lawyers hate to do.

You could outsource the worst of the jobs to machines, while focusing on managing client relationships and serve more clients.

















#### **Boston Dynamics Spot**

Incredibly harder to do than it looks.

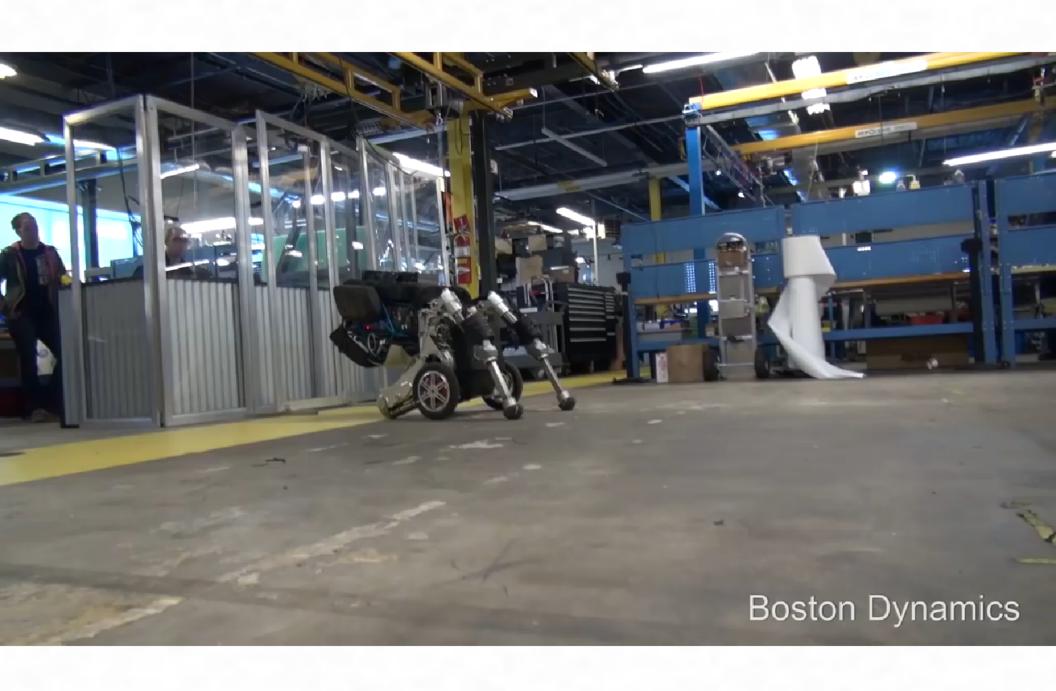






#### **Boston Dynamics Handle**

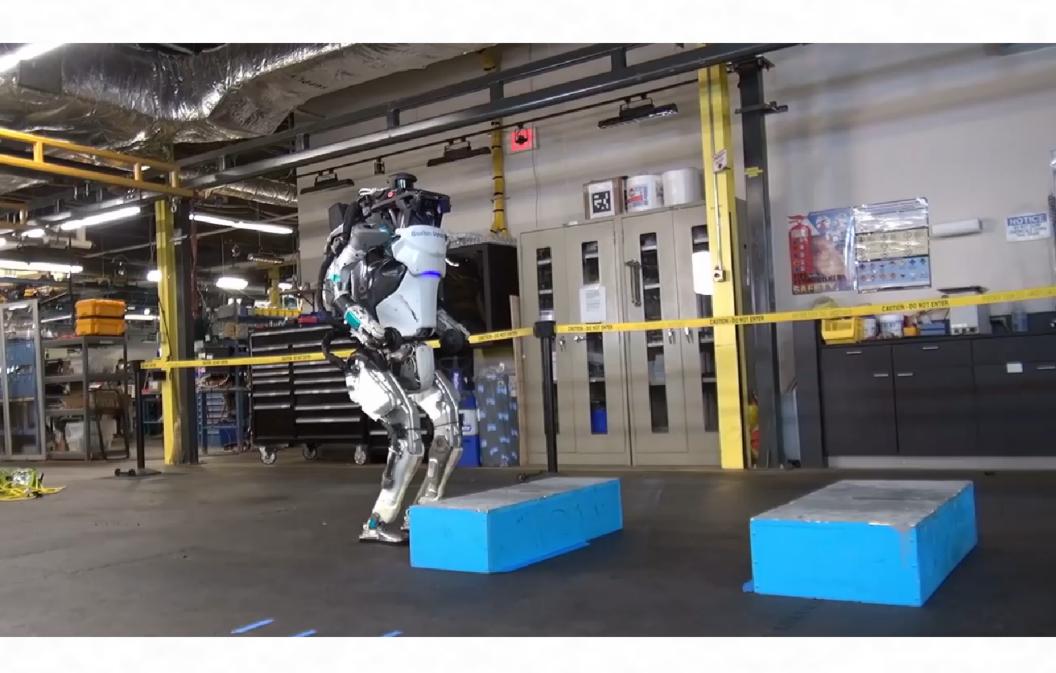
Clever robot to make it easy to maneuver





### **Boston Dynamics Atlas**

Another of the great robots from Boston Dynamics.

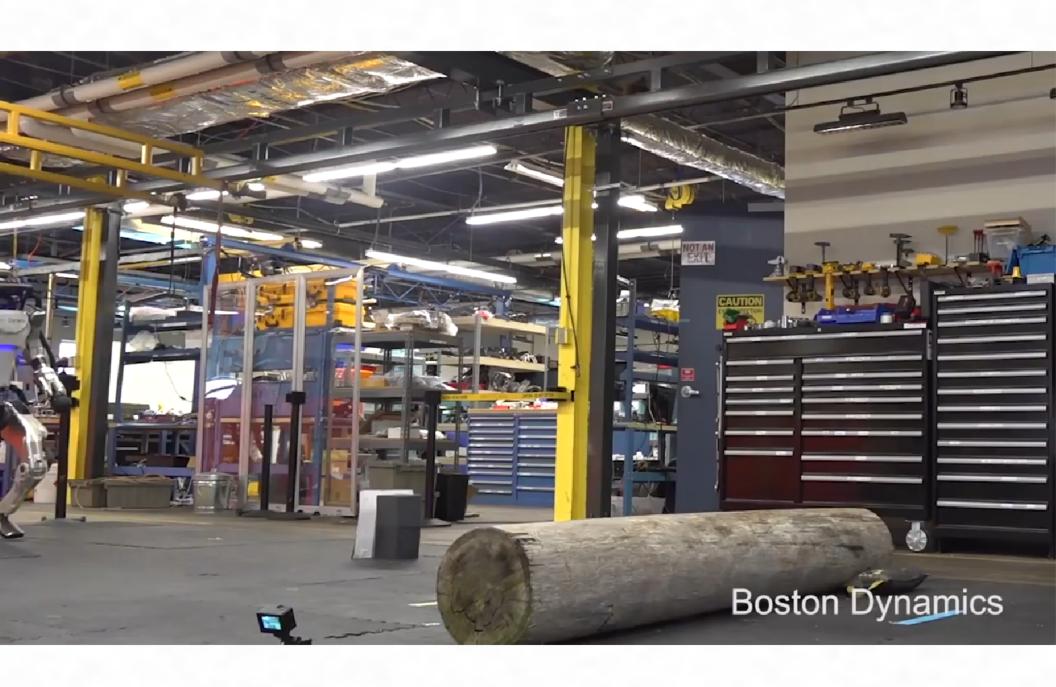






## **Boston Dynamics Atlas**

The evolution of Atlas

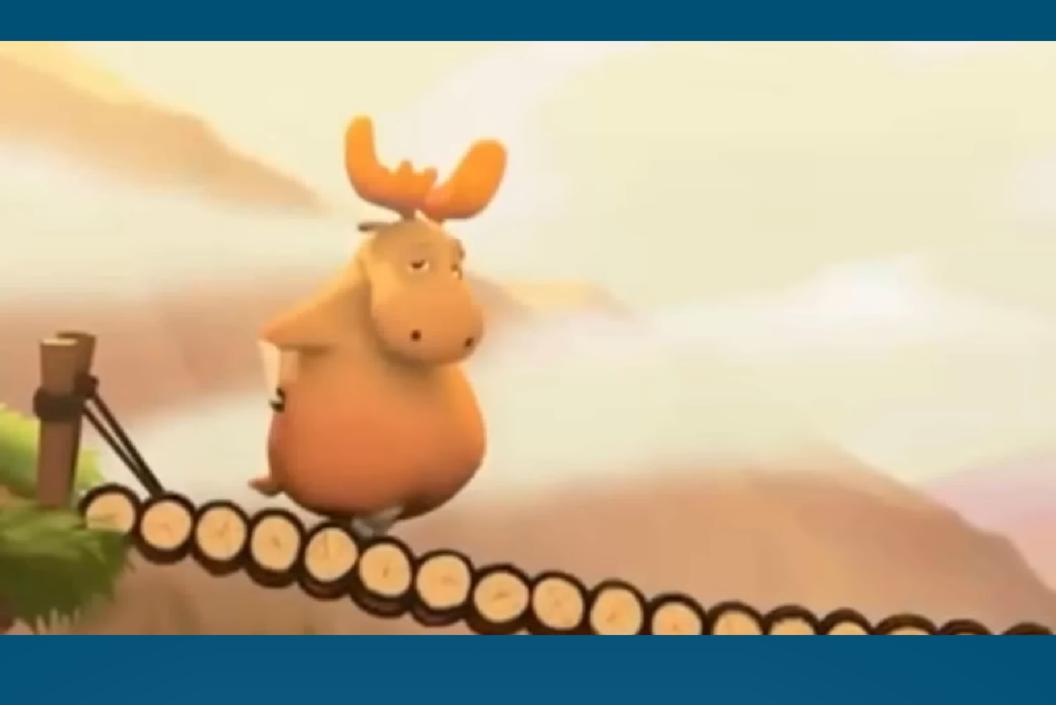








# Online Dispute Resolution



Online dispute resolution (ODR) is a branch of dispute resolution which uses technology to facilitate the resolution of disputes between parties.

It primarily involves negotiation, mediation or arbitration, or a combination of all three.



In this respect it is often seen as being the online equivalent of alternative dispute resolution (ADR).

....However, ODR can also augment these traditional means of resolving disputes by applying innovative techniques and online technologies to the process.

When the process is conducted mainly online it is referred to as ODR... including the initial filing, the neutral appointment, evidentiary processes, oral hearings if needed, online discussions, and even the rendering of binding settlements.

PWG

The introduction of ICT in dispute resolution is currently growing to the extent that the difference between off-line dispute resolution and ODR is blurry. It has been observed that it is only possible to distinguish between proceedings that rely heavily on online technology and proceedings that do not.

## The Fourth Party

The assistance of ICT has been named by Katsh and Rifkin as the 'fourth party' because ODR is seen as an independent input to the management of the dispute.

In addition to the two (or more) disputants and the third neutral party, the labelling of technology as the fourth party is a clear metaphor which stresses how technology can be as powerful as to change the traditional three side model.

The fourth party may do many things such as organize information, send automatic responses, shape writing communications in a more polite and constructive manner e.g. blocking foul language. In addition, it can monitor performance, schedule meetings, clarify interests and priorities, and so on.

The assistance of the fourth party will increase the more technology advances, thus reducing the role of the third neutral party. It has been predicted that virtual "fourth party" avatars will be created to judge disputes and could become more skilled and intelligent over time.

ICT advance is occurring exponentially, as a result, ODR processes are increasing in efficiency providing their disputants with greater advantages in terms of time saving and cost reductions.

# Squaretrade

One of the leading ODR provider for consumer mediation is SquareTrade.

It was contracted by a number of market places, the largest of which was eBay.

SquareTrade did not handle disputes between users and eBay, only between sellers and buyers on eBay.

SquareTrade did not handle disputes between users and eBay, only between sellers and square trade

SquareTrade offered two levels of dispute resolution: assisted negotiation and mediation.

SquareTrade has resolved millions of disputes across 120 countries in 5 different languages.

The advantage of dealing with large number of disputes is that the same issues arise many times, thus it is possible to divide the disputes into different sections.

The SquareTrade process starts when a buyer or a seller filed a complaint. To do so, the claimant is asked to fill out a web-based standard claim form that identifies the type of dispute and presents a list of common solutions, from which the claimant selects the ones that he agreed to.

The other party is contacted by email where he is informed about the SquareTrade process, and asked whether he wishes to participate. The parties are often keen on participating because this is the only manner by which the buyer can get redress and the seller positive feedback.

The other party files the response, selects the resolutions. If both parties agree on the same resolution, the dispute is resolved.

When an agreement can not be reached, parties are put into a negotiation environment.

A web interface is used to shape communications into a constructive and polite negotiation. This is achieved with software tools that limit the free text space, encourage the proposition of agreements, set deadlines and even shape the tone of exchanges.

Most disputes (over 80 percent) are resolved during the first two stages, which is an impressive success rate given that in the majority of cases, the parties had already been involved in some type of failed direct negotiation before engaging with SquareTrade.

In the rest of the cases a mediator can be requested for a nominal fee, acting as an expert evaluator or conciliator that makes settlement proposals to the parties.

This second stage involves the payment of a 29.95 USD fee.



## Legal Technology Resources









































#### **Android Apps in One Hour for Lawyers**

By: Daniel J. Siegel

Lawyers are already using Android devices to make phone calls, check e-mail, and send text messages but Android smartphones or tablets can also help run a law practice. This book highlights the "best of the best" apps that will allow you to practice law from your mobile device. In just one hour, this book will describe how to buy, install, and update Android apps, and more.

Featured in the following session: The Best in Mobile Apps for IOS and Android

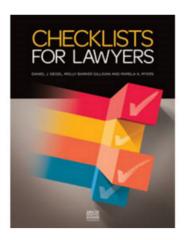


#### **Blogging in One Hour for Lawyers**

By: Ernie Svenson

Lawyers in any size firm can reach a global audience at little to no cost with a blog. An effective blog can help you promote your practice, become more "findable" online, and take charge of how you are perceived by clients, journalists, and beyond. Learn how to create, maintain, and improve a legal blog-and gain new business opportunities along the way.

Featured in the following sessions: Effective Ways to Communicate with Email Newsletters, E-Books and Blogs



#### **Checklists for Lawyers**

By: Daniel Siegel, Molly Gilligan, Pamela Myers Many of us rely on checklists to get through the day. This guide takes the process of using checklists a step further by showing you how to create systems for your everyday law practice to ensure that tasks get done correctly every time. A checklist will help you deal with an overwhelming amount of information that must be applied at just the right moment to reach a favorable outcome for your client.

Featured in the following session: The Devil Is In The Details - How to Map and Fix Processes



































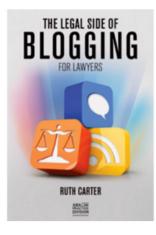




#### The Electronic Evidence and Discovery Handbook: Forms, **Checklists and Guidelines**

By: Bruce A. Olson, John Simek, and Sharon D Nelson This book provides templates needed to develop an effective e-discovery strategy, and to frame appropriate ediscovery requests. The authors also bring you up to speed in the e-discovery field and provide more than 70 forms and checklists you need.

Featured in the following sessions: E-Discovery Case Law Update, E-Discovery from the Mobile to the Cloud to Social Media



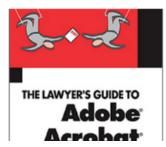
#### The Legal Side of Blogging for Lawyers

By: Ruth Barras Carter

Anyone with a blog should understand the legal implications of publishing their thoughts on the internet. Written by a blogger for bloggers, The Legal Side of Blogging for Lawyers addresses the full scope of legal issues that accompany blogging, including intellectual property, criminal law, employment law, professional conduct, and much more. In this book, experienced attorney Ruth Carter explains your rights as a blogger, discusses real-life examples of what can go wrong, and offers advice about how to avoid the common legal pitfalls

of blogging.

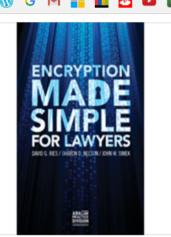
Featured in the following session: Effective Ways to Communicate with Email Newsletters, E-Books and Blogs



#### The Lawyer's Guide to Adobe Acrobat, Third Edition

By: David Masters

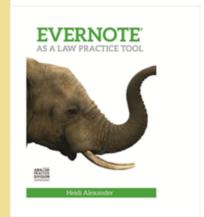
This book focuses on the ways lawyers can benefit from using Adobe® Acrobat 8, to create Portable Document Format (PDF) files. PDF files are reliable, easy-to-use, electronic files for sharing, reviewing, filing, and archiving



#### **Encryption Made Simple for Lawyers**

By: David G. Ries, John Simek, and Sharon D Nelson Data breaches have become a common occurrence, and hackers cannot only get confidential details about a case or deal, but steal your client's information as well. Fortunately, easy-to-use options are available today for encryption.

Featured in the following sessions: A Fool and His Data Are Easily Parted: Fundamentals of Data Protection, Drastic Times Call for Drastic Measure: Securing Client, Colleague and Co-Counsel Communications



#### Evernote® as a Law Practice Tool

By: Heidi Alexander

Looking for a simple and cost-effective way to organize your practice? Evernote is a memory aid for just about everything you do. Say goodbye to hours spent searching for meeting notes or that to-do list you think you put in your briefcase, and say hello to the single program where you can access important data with the click of a button and save important information wherever and whenever you need.

Featured in the following session: Evernote as a Law Practice Tool



#### Facebook® in One Hour for Lawyers

By: Allison C. Shields and Dennis Kennedy
Lawyers are missing a major opportunity if they do not
consider the business possibilities of their Facebook®
accounts. With a few simple steps, lawyers can harness
Facebook® to market their services, grow their practices,
and expand their legal network–all by using the same
methods they already use to communicate with friends and
family. This book will show any attorney how to use this
powerful tool for both professional and personal purposes.

Featured in the following session: Making It Rain: How



Storing your files in the cloud has many advantages. You can view your files from any phone, tablet or computer that's connected to the Internet, and the cloud can also provide backup for files so they'll never disappear if your phone gets lost or your computer crashes. Using the cloud is a no-brainer, but picking which service to use is a bit more difficult.

#### Cloud storage comparison

	OneDrive	Dropbox	Google Drive	Вох	Amazon Cloud Drive
File size restrictions?	10GB	10GB with website, none with Dropbox apps	5TB	250MB for free plan, 5GB for paid personal plan	2GB*
Free storage?	5GB**	2GB	15GB	10GB	No***
Can I earn extra free storage?	No**	Yes	No	No	No
Paid plans	\$2/month for 50GB**	\$10/month for 1TB	\$2/month 100GB, \$10/month for 1TB	\$10/month for 100GB	\$12/year for unlimited photos, \$60/year for unlimited files
OSes supported	Windows, Mac, Android, iOS, Windows Phone	Windows, Mac, Linux, Android, iOS, Windows Phone, BlackBerry, Kindle Fire	Windows, Mac, Android, iOS	Windows, Mac, Android, iOS, Windows Phone, BlackBerry	Windows, Mac, Android, iOS, Kindle Fire







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#### Law Technology Now

Hosted by Monica Bay and Bob Ambrogi, *Law Technology Now* explores the latest in legal technology. Key players in the legal technology community join the hosts to highlight the top trends and developments in the legal world. Tune in to hear conversations about technology improving the practice of law, providing greater access to justice, and making legal services more affordable.

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By JOE PATRICE

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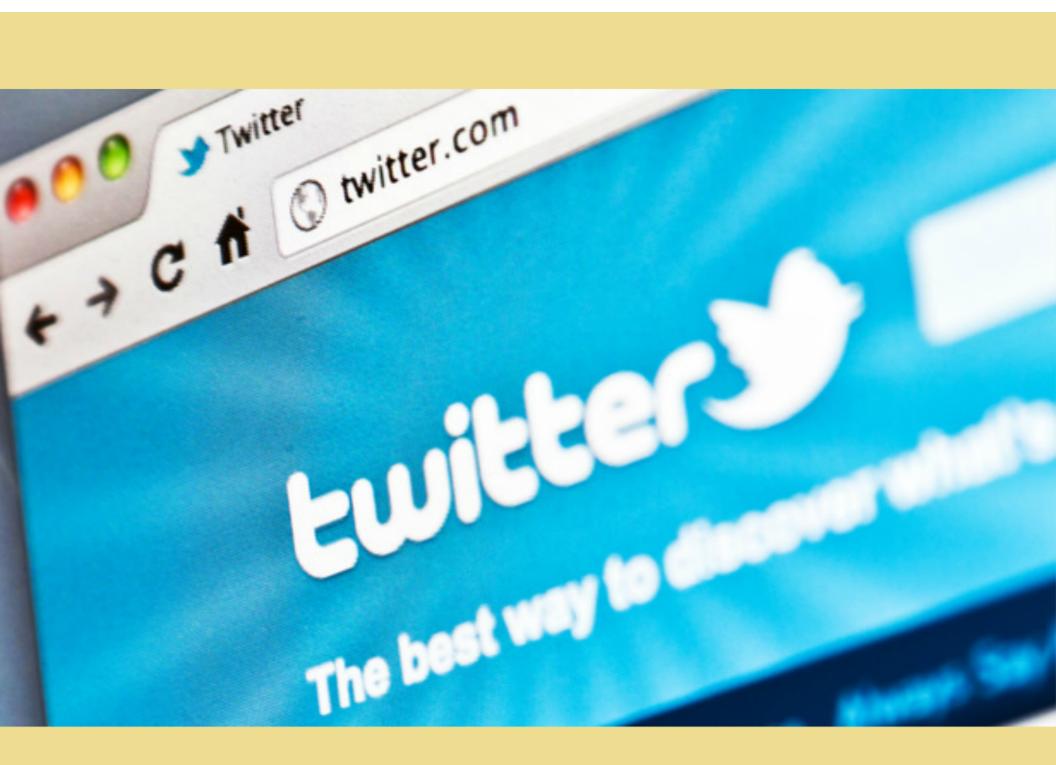
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**Attorney** 

Location: San Francisco, California

posted by Kinney Recruiting LLC

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#### 1. Brad Smith

Handle: @BradSmi

The Twitter page of Microsoft president and chief legal officer Brad Smith can be a helpful resource for any legal tech aficionado wanting to stay ahead of the latest trends, from new products and processes to tech-related precedents set in court.

While Smith's feed includes Microsoft's business, legal, and philanthropic announcements, it also offers his unfiltered opinions on a host of pressing tech issues. For example, Smith praises the praises the EU's General Data Protection Regulation as "an important step forward for individual rights" and supports establishing a "Digital Geneva Convention" to protect citizen from nation-state hacking



#### 2. Ben Weinberger

#### @BenTheCIO

Ben Weinberger, CIO of practice management and info governance software company Prosperoware, has his finger on the pulse of the legal technology industry. He regularly curates the latest news and analysis on how the practice of law is changing, struggling and benefiting from an ever-quickening tech evolution. (Full disclosure: Weinberger tweets Legaltech News articles as well.)

But Weinberger also knows how to have some fun. After all, legal techies may need to take a break from adapting to a new reality to enjoy the quirkier side of the law and find some personal time to get away from it all



#### 3. Daniel Brennan

#### @danielbrennan

For those searching for a legal executive who has mastered the art of the tweet, look no further than Twitter itself (the company, that is). Twitter's vice president and deputy general counsel Daniel Brennan excels in bringing out the conversational nature of the platform, mixing topical humor, political discussion, and personal anecdotes with a healthy dose of legal tech news and insight.

And Brennan's position at the helm of one of social media's biggest players makes his take on recent events all the more interesting. From defending the GC at tech giant Yahoo to following Twitter's influence in the courts Brennan offers an inside look at how the digital age is changing the legal world— and vice versa



























































#### The New Information Governance Playbook for Addressing Digital Age Threats

The demand within organizations to manage the growth of electronic information has never been greater. Organizations across the spectrum of industry verticals are generally struggling to address the onslaught of data they both generate and receive. While there is nothing new to this trend, companies should be concerned about new threats arising from that data. From lax internal protocols and unsecured corporate networks to malicious insiders and cyber criminals, these threats-if left unchecked-could threaten the viability of the enterprise.

While some of these factors have posed challenges for years, they are particularly troubling at this time. Cyberattacks are on the rise. The Internet of Things, with its potential to generate revenue, continues to proliferate; as it does so, cybersecurity risks multiply exponentially. Threats are also originating internally as employees increasingly use consumer-grade cloud applications to engage in corporate espionage.

Given the reality of these threats and others, organizations must take proactive steps to govern their information and prepare accordingly. While there is much that could be done to shore up electronic vulnerabilities, the best way to do so is through a holistic information governance strategy. Different from litigation readiness programs of yesteryear that were primarily concerned with preparing for electronic discovery, organizations today need a new information governance playbook that deploys actionable procedures to prevent or mitigate harm from contemporaneous threats to valuable corporate data.

For those organizations that are seeking understanding and guidance on these issues, the Coalition of Technology Resources for Lawyers (CTRL) has prepared this information governance playbook. Developed so companies can better recognize and address the growing risks associated with digital age threats, the playbook should enable them to:

- Learn how cyberattacks, the Internet of Things, and personal cloud use can endanger unsuspecting organizations;
- Develop actionable policies and enforcement mechanisms to protect against risks and strengthen
- Craft response plans and communication protocols that mitigate damages; and
- Understand the role that analytics can play in detecting cyber risks and enforcing internal protocols.

#### I. The Ubiquity of Cyberattacks in the Digital Age

The exponential growth of digital data has brought a corresponding increase in cyberattacks. Notorious incidents involving the Mossack Fonseca law firm in Panama, 1 Ashley Madison, 2 and Sony Pictures 3 have certainly grabbed the headlines. 4 Nevertheless, companies from various industries grapple daily with cyberattacks. 5

<sup>&</sup>lt;sup>1</sup> Nick Cumming-Bruce & Eric Lipton, Employee of Panama Papers Law Firm, Mossack Fonseca, Is Arrested in Switzerland, THE NEW YORK TIMES (June 15, 2016), http://www.nytimes.com/2016/06/16/world/europe/employee-of-panama-papers-law-firm-mossack-fonseca-is-arrested-

<sup>&</sup>lt;sup>2</sup> Claire Reilly, You blew it, Ashley Madison: Dating site slammed for security "shortcomings", CNET (Aug. 23, 2016, 6:47 PM), https://www.cnet.com/news/canada-australia-privacy-report-ashley-madison-avid-life-media-hack/.

<sup>&</sup>lt;sup>3</sup> Philin Favro, The Same Hack Signals The Need For Information Governance, INSIDE COUNSEL (Ian. 22, 2015), available at



#### **PDFSAM**

Free software to manipulate PDF files

#### Where:

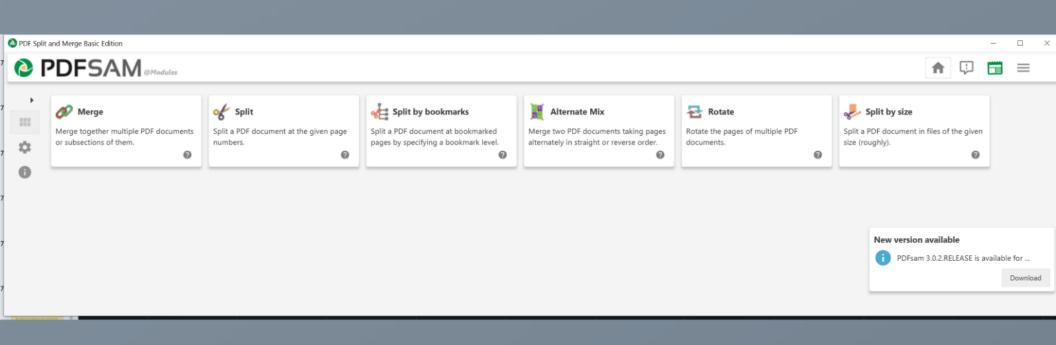


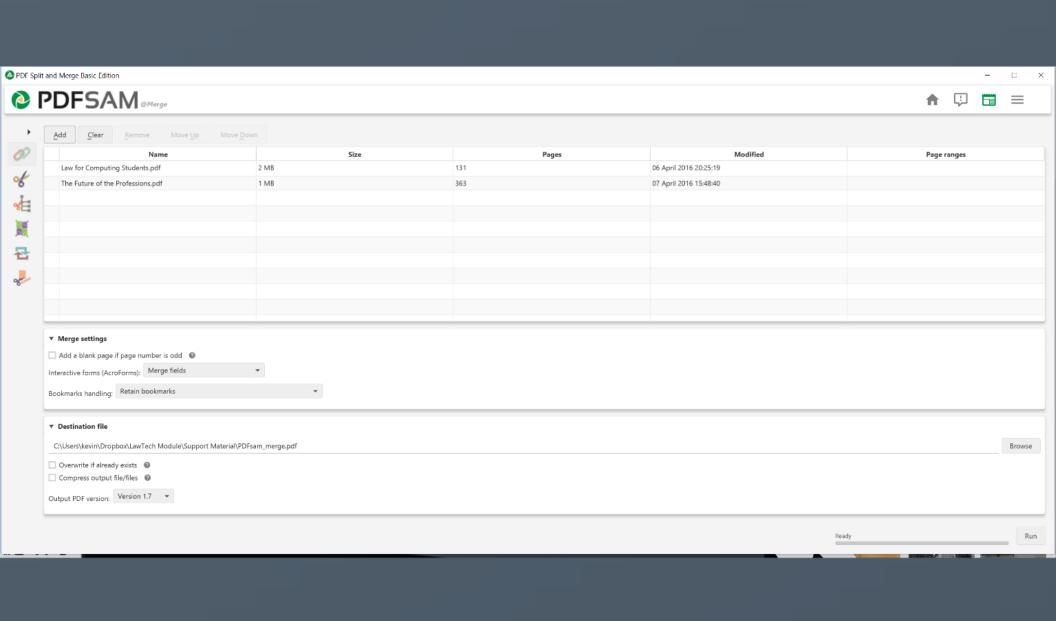
PDFSAM can be downloaded for free from <a href="http://www.pdfsam.org/downloads/">http://www.pdfsam.org/downloads/</a>

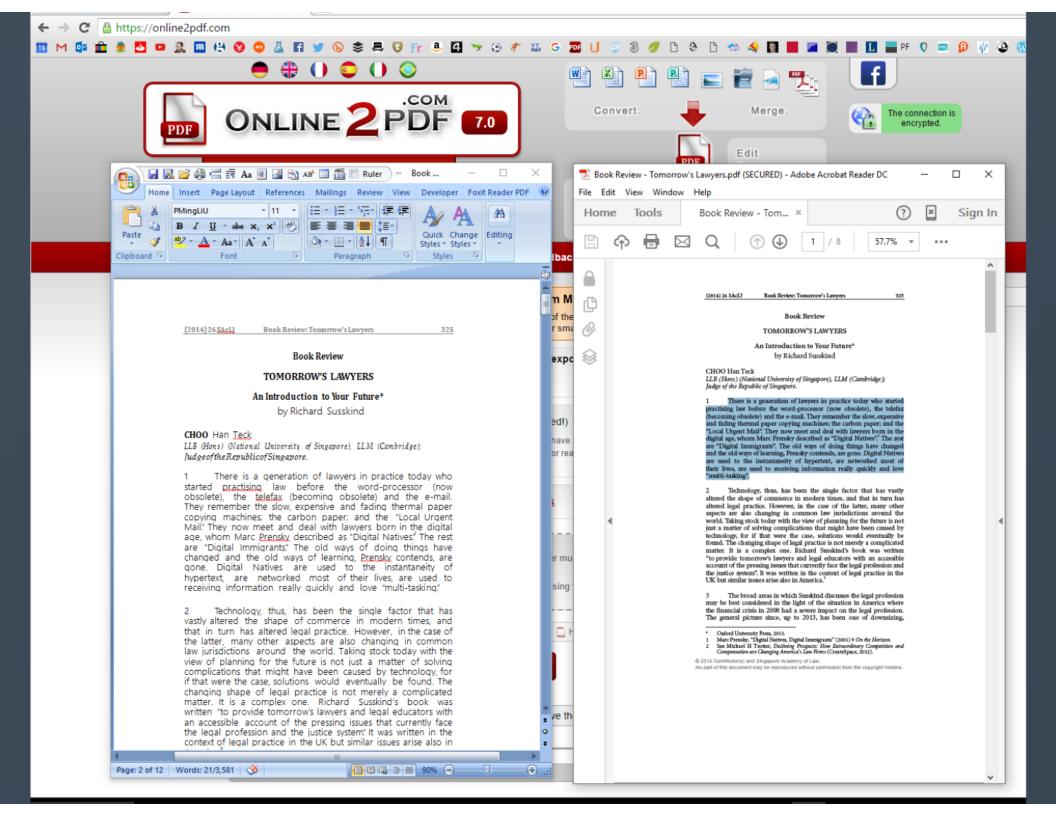
#### What else:

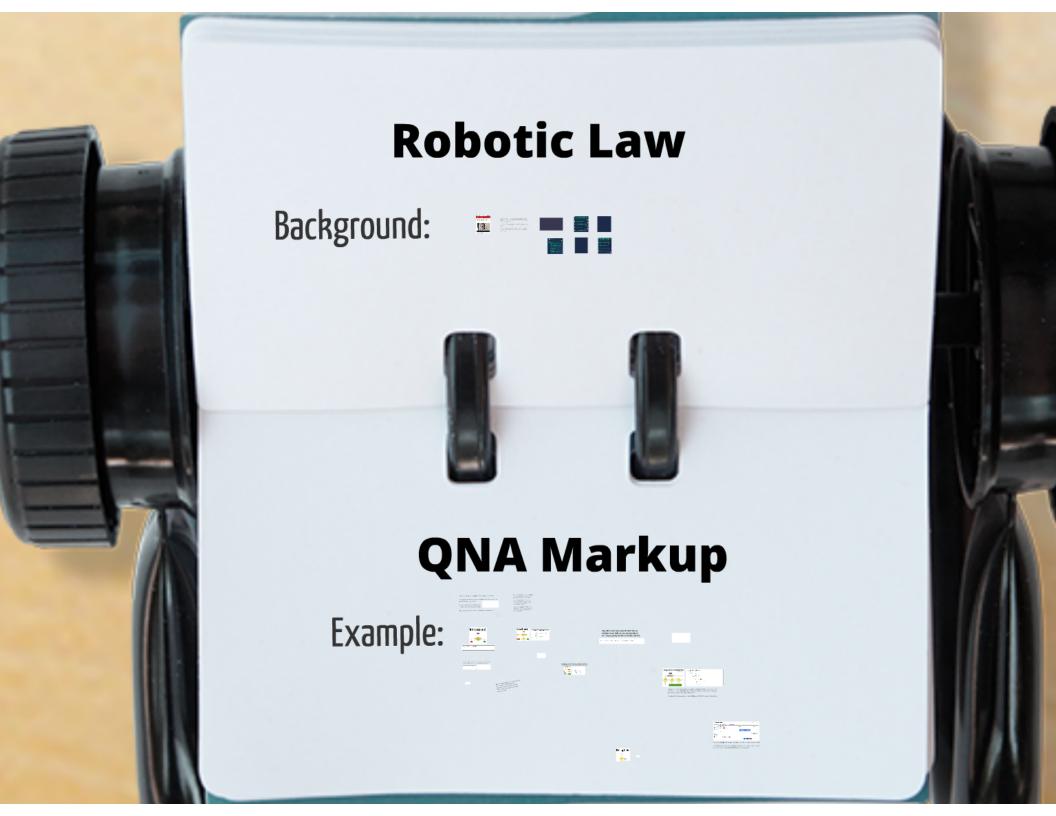


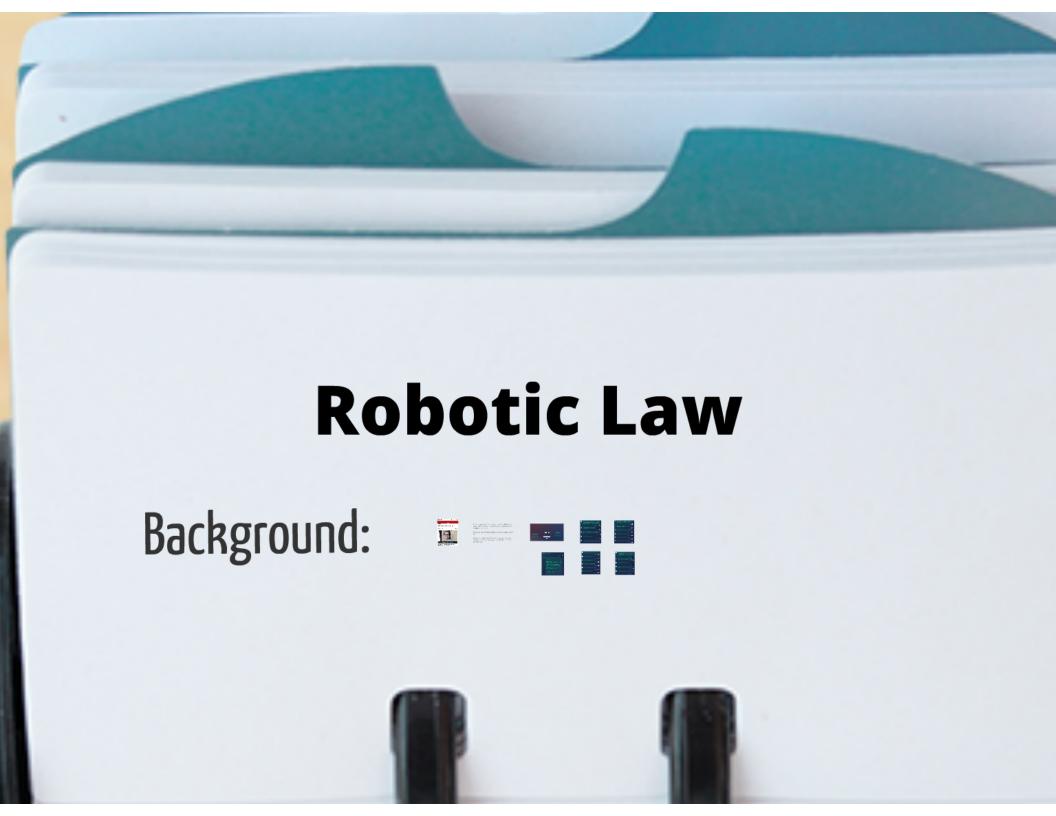
There are many free online document conversion tools. One particularly good free one is https://online2pdf.com/











# Background:



#### Technology

#### 'Robot lawyer' fights parking tickets

By Zoe Kleinman Technology reporter, BBC News

© 28 June 2016 | Technology





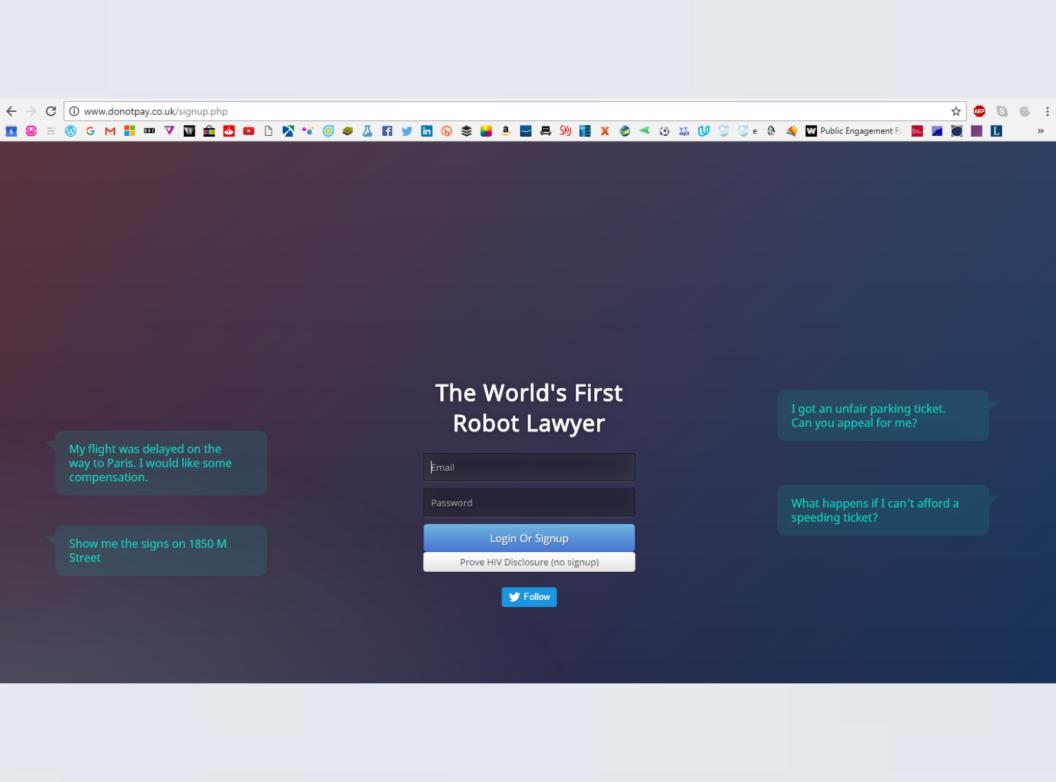
Joshua Diowael built the bot after receiving Countiess paining tickets himse

A chatbot programmed by a British teenager has successfully challenged 160,000 parking tickets since its launch last year.

The chatbot programmed by a British teenager has successfully challenged 500,000 parking tickets since its launch in 2015. It asks a series of questions to determine the validity of a penalty notice.

The bot asks a series of questions about the circumstances surrounding the parking ticket.

Mr Browder was inspired to build the bot, which he describes as "the world's first robot lawyer", after receiving "countless" parking tickets himself. It took him three months to program.





Hello, I am the first robot lawyer. I can answer questions, draft documents and send appeals. At the moment, I can help with parking tickets (New York and UK), delayed flights/late trains (EU) and claiming PPI. Talk to me by typing in the message box below or ask "what can you do" for a list of some examples.

parking ticket





Was your ticket issued in the UK, New York or Seattle?

uk





Let me ask you a few questions about your ticket. Were you or someone you know driving the car at the time of the ticket?

yes





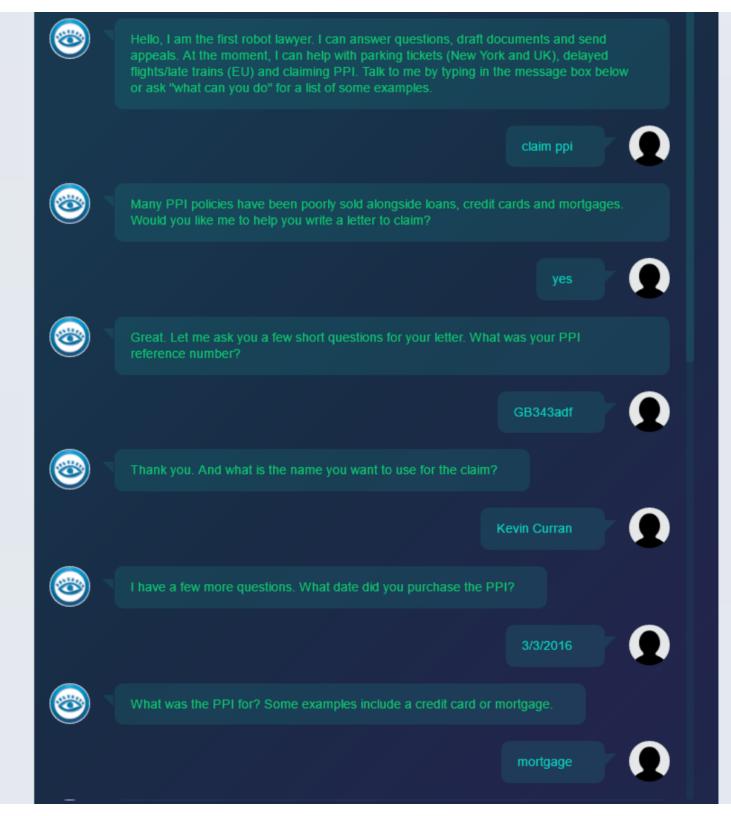
Was it hard to understand the signs?

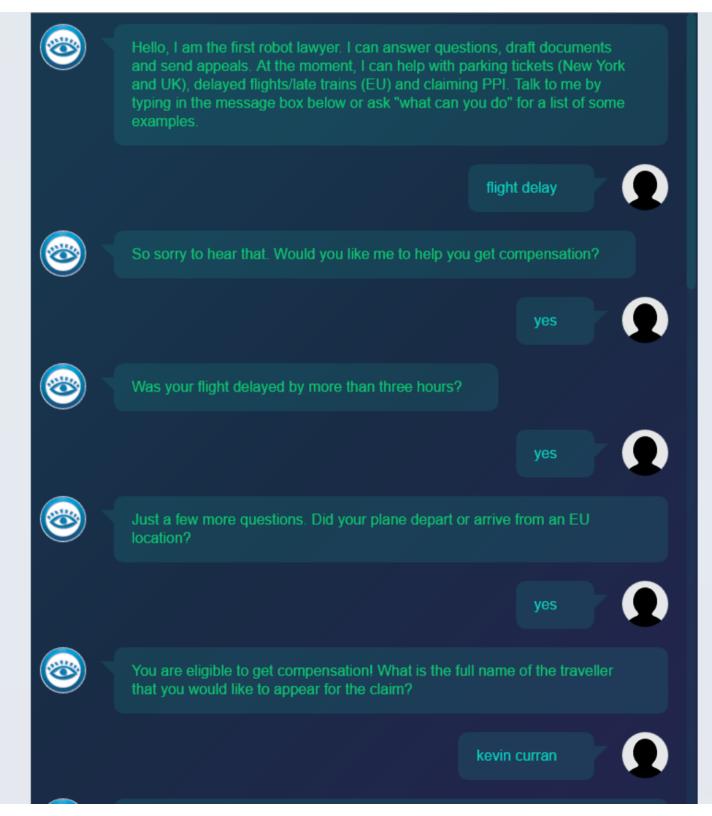
yes

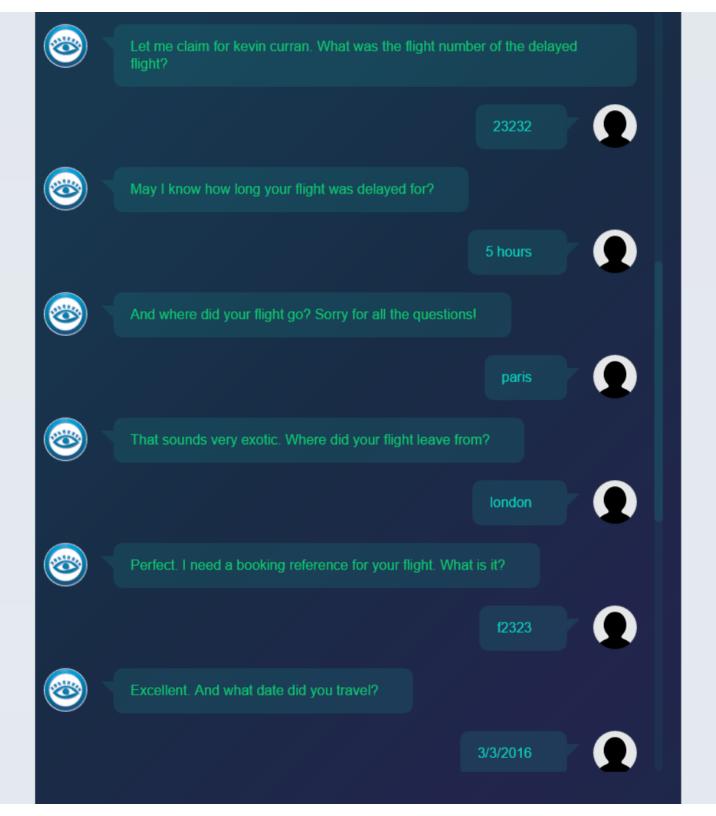




Great. I think I have understood the problem. Click here to generate your appeal.









5pm





Thanks for putting up with that! Please find your claim below:

To whom it may concern,

Thank you for taking the time to read this letter. I am writing on the basis that when I took the kevin curran 23232, the flight in question was delayed by kevin curran.

The decision of the Court of Justice of the European Union in Tui & others v CAA confirmed the availability of compensation for delay as set out in the Sturgeon case. I am therefore seeking to apply EC Regulation 261/2004 for this delayed flight.

For these reasons, I seek a reply to this letter within the next 14 days. As I'm sure you are aware, simply having an address in the United Kingdom establishes jurisdiction for the UK courts. Therefore, if I do not receive a response, I intend to further my complaint, including the possibility of involving the courts.

I understand that in these situations, you may require additional information to verify my claim. Please find these details below:

Date of flight: 3/3/2016 Time of flight: 5pm

Booking reference: f2323

I hope that you will accept my claim and arrange for the compensation to be sent promptly.

Thank you,



### **QNA Markup**

Example:























· QnA is a markup language for people with little or no programming experience.

· It was designed with attorneys in mind and transforms blocks of text into interactive

question and answer sessions (QnAs).

 These QnAs can be used as standalone expert systems or in rulebased document construction.

· Plus, the entire project is open source. Among other things, that means free.

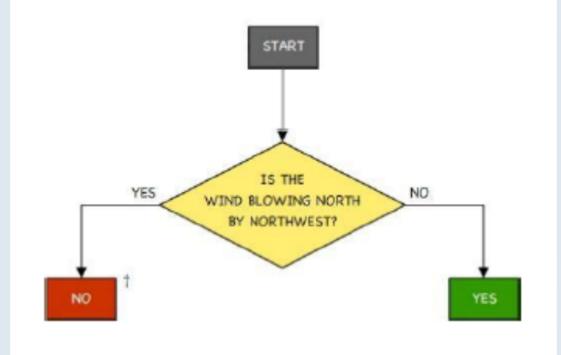
QnA uses specially formatted text (e.g., a  $\mathbb{Q}$ : at the beginning of a line) to define how a computer will present text. These bits of formatting are called tags, and QnA only has ten.

We will next use two of them (Q & A) to rewrite the decision tree on the left. Of course, to see interactive output, you'll need to type the text into a QnA editor/interpreter like in the lab after this.

The contents of  $\mathbb{Q}$  (question) tags are rendered inside left aligned text bubbles. The first  $\mathbb{Q}$  tag's content is visible after loading. The content of other  $\mathbb{Q}$  tags become visible after a user selects its preceding A tag.

### Is the prince sane?

GIVEN THE PRINCE IS THE PRINCE OF DENMARK



```
Q: Is the wind blowing north by northwest?
A: Yes.
Q: No. Yet there is method in it.
A: No.
Q: Yes.
```

If you put that into a QnA editor and hit "Update Outputs," you'll see an interactive version of the tree. You'll also see a set of target ids added to your Q tags e.g.

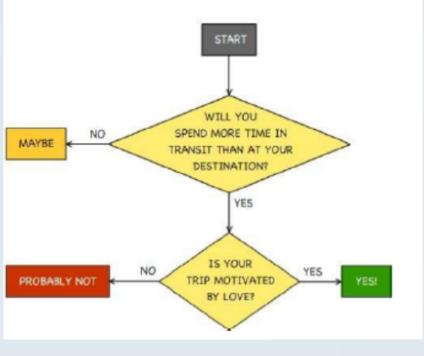
Q(1): Is the wind blowing north by northwest?
A: Yes.
Q(1.1): No. Yet there is method in it.
A: No.
Q(1.2): Yes.





Anyhow, it should be easy to see how you could continue this formatting for additional branches, and although this example does not show it, you can include as many A tags as you like. Just remember indents are important.

### Is it worth the trip?



```
Q: Will you spend more time in transit than at your destination?
A: Yes.

Q: Is your trip motivated by love?
A: Yes.

Q: Yes!

A: No.

Q: Probably not

A: No.

Q: Maybe
```

Markup Style Load Template ▼ Load File New

Q(1): Will you spend more time in transit than at your destination?

A: Yes.

Q(1.1): Is your trip motivated by love?

A: Yes.

Q(1.1.1): Yes!

A: No.

Q(1.1.2): Probably not

A: No.

Q(1.2): Maybe

Output Will you spend more time in transit than at your destination?

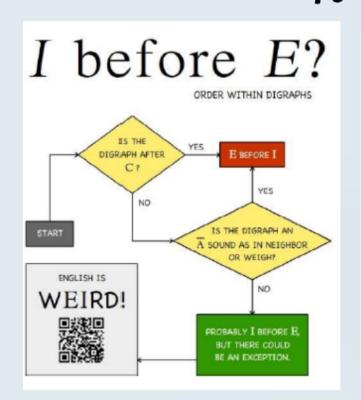
Yes.

Yes.

No.

Start over.

But what if we have a decision tree with branches that do more than fork? What if they join back on themselves? No problem.. e.



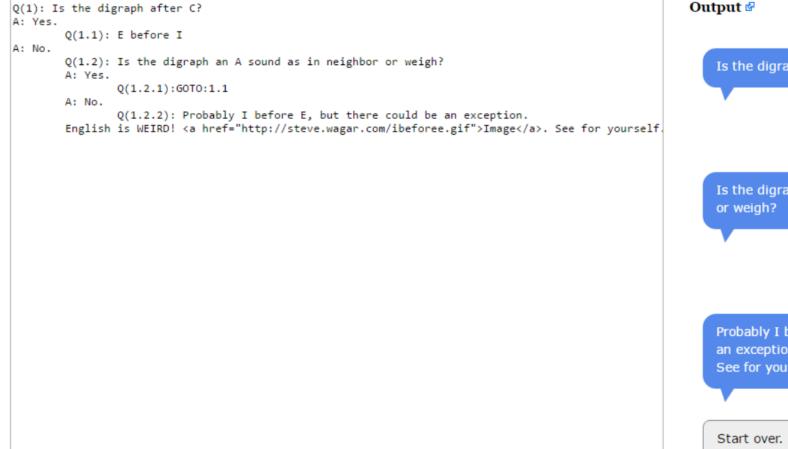
```
Q(1): Is the digraph after C?
A: Yes.
Q(1.1): E before I

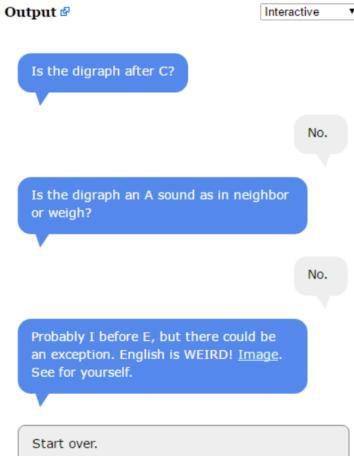
A: No.
Q(1.2): Is the digraph an A sound as in neighbor or weigh?
A: Yes.
Q(1.2.1):GOTO:1.1
A: No.
Q(1.2.2): Probably I before E, but there could be an exception. English is WEIRD!
```

Now what about that weird QR Code? Can we add links to our QnA? Yes. You can add links to an A tag by placing the URL in brackets, like this:

```
[...]
Q(1.2.2): Probably I before E, but there could be an exception. English is WEIRD! A:[http://steve.wagar.com/ibeforee.htm] See for yourself.
```

Markup Style Load Template ▼ Load File New





# Titling a Law Journal Article/Note WHERE X IS A TITLE. START GENERATE (NEW) X. OOSTAIN A PUN? YES SINE QUA NON. FEEL ENTITLED TO USE X.

```
Q(1): What is your working title?

X:mytitle

Q(1.1): Hum... Is there a pun in there?

A: Yes.

Q(1.1.1):GOTO:2

A: No.

Q(1.1.2): Any wordplay?

A: Yes.

Q(1.1.2.1):GOTO:2

A: No.

Q(1.1.2.2): Latin?

A: Yes.

Q(1.1.2.2.1):GOTO:2

A: No.

Q(1.1.2.2.1):GOTO:2

A: No.

Q(1.1.2.2.1):GOTO:2

A: No.

Q(1.1.2.2.2): Well that won't do. Think hard. GOTO:1

Q(2): Sine qua non. Feel enTITLED to use "<x>mytitle</x>."
```

If you want users to type an answer, you'll need a new tag. The X tag works pretty much like the A tag, except that it renders the "answer" as a text field instead of a button. The text following an X tag becomes the name of a variable containing the user's answer. Let us see what we can do with this decision tree?

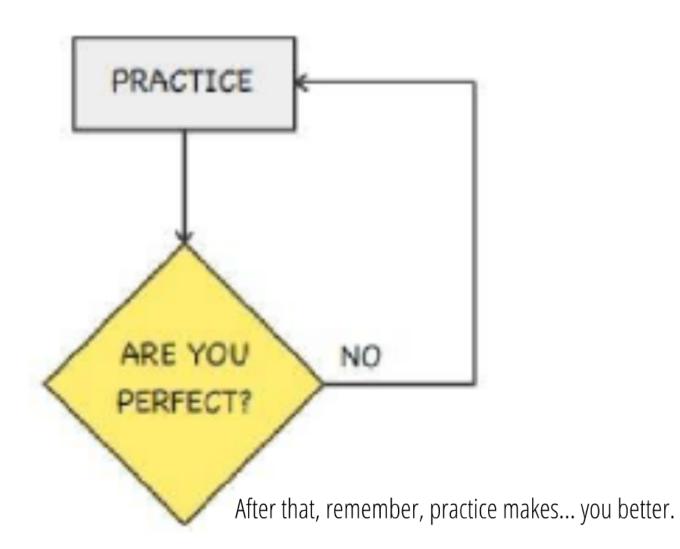
For starters, we'll turn "Generate (new) X" into a question, "What is your working title?" Can you guess how it will render?



Yes, users are asked to type in their working title, and if it passes all the "tests," it is shown to the user at the end.

But that's not all, you can do more than just send people to websites and parrot back things they typed. You can stitch everything together to create a document based on a user's answers to questions.

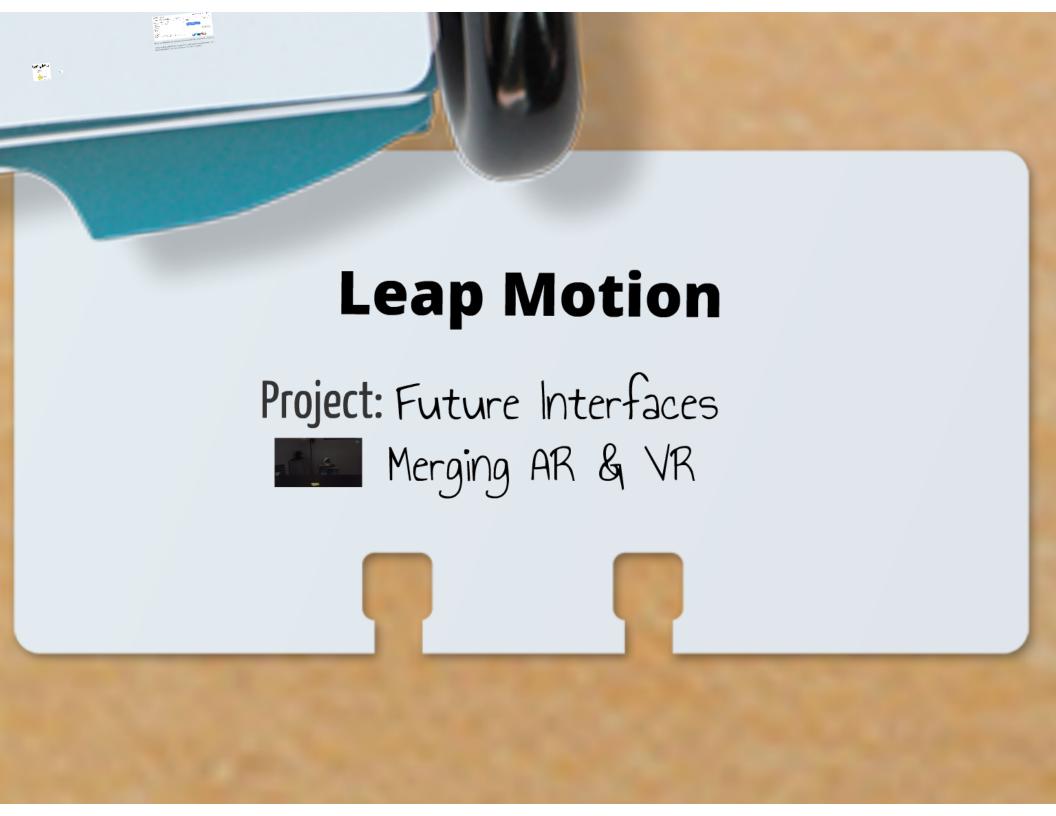
## Getting Better

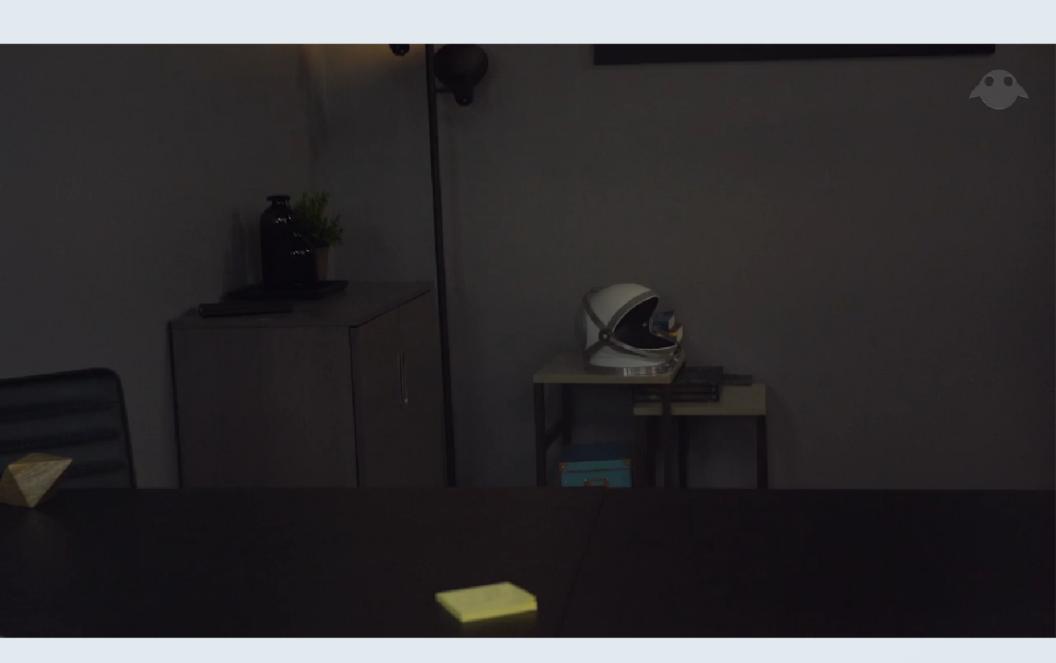




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