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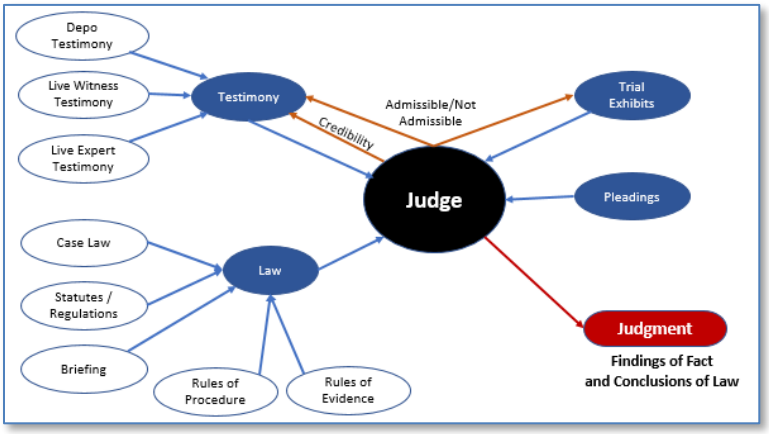
Short Circuits

The AI Judge Will Hear Your Case Now

By Amy C. Falcon

Artificial Intelligence. Bill Gates, billionaire founder of Microsoft, has said the power of artificial intelligence—that is, "the capability of a machine to imitate intelligent human behavior"[1] or to replicate human thinking[2]—is "so incredible, it will change society in some very deep ways."[3] Could that include civil litigation? In civil litigation, the human judge takes the parties' arguments and proffered evidence, makes evidentiary rulings, and considers case law "peer pressure" (i.e., stare decisis) to make rulings and issue judgments.[4]



Can AI's power be harnessed to duplicate these cognitive processes and create an AI Judge who decides a case? In brief, yes AI can, but only to a limited extent.

In Hangzhou, China, an AI Judge presides over the Internet Court, which is the forum for disputes arising from online transactions, copyright and trademark, ownership and

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1 *Artificial Intelligence*, MERRIAM-WEBSTER DICTIONARY, https://www.merriam-webster.com/dictionary/artificial%20intelligence (last visited May 26, 2021).

2 Dan Sincavage, *How Artificial Intelligence Will Change Decision-Making for Business*, BUSINESS2COMMUNITY (Aug. 24, 2017), https://www.business2community.com/business-innovation/artificial-intelligence-will-change-decision-making-businesses-01901048.

3 Catherine Clifford, *Bill Gates: A.I. is Like Nuclear Energy – 'Both Promising and Dangerous'*, CNBC (Mar. 26, 2019, 8:45 AM), https://www.cnbc.com/2019/03/26/bill-gates-artificial-intelligence-both-promising-and-dangerous.html.

4 Because an AI jury is unlikely, as an AI cannot be the peer of a human, this article is limited to considering the AI Judge ruling on motions or acting as the arbiter of the facts and law in a bench trial.

infringement of domains, trade disputes, and e-commerce product liability claims.[5] The cases rely primarily on blockchain evidence, which makes the facts and legal issues fairly consistent from case to case.[6] The parties upload documents. The AI Judge then leads them through various questions to decide the case.[7] Chinese litigants seem happy with the AI Judge; it resolved more than 3.1 million cases from March to October 2019.[8] Estonia plans to implement an AI Judge to adjudicate small claims.[9] Similar to China's AI Judge, the parties will upload documents and other information. The AI Judge will issue a decision—that is reviewable by a human judge.[10] These cases are a far cry from a complex civil case involving multiple witnesses and thousands of exhibits.

These AI Judges use weak AI, which is not advanced sufficiently to duplicate the human judge's cognitive processes in deciding a complex case and explaining the decision.[11] Weak AI (like Siri, Alexa, and Google) [12] uses algorithms that enable the AI to act, process, data, and make decisions to accomplish a specific task, rather than cognitive reasoning.[13] Weak AI is driven by mountains of data that is used to "train" the AI to do a particular task. Thousands of photographs can train an AI to distinguish pandas from koalas.[14] However, once an AI learns a particular task, unlike a human, it cannot adapt how it learned to do that task to doing even a similar task that involves something it does not "know" about. "Machine-learning systems can

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5 Santosh Paul, *Will Artificial Intelligence replace Judging?*, BAR AND BENCH (May 28, 2020), https://www.barandbench.com/columns/is-artificial-intelligence-replacing-judging.

6 *Id.*

7 *Id.*; Julie Celestial, *China Unveils Digital Courts with AI Judges and Verdicts Via Apps*, THE WATCHERS (Dec. 25, 2019), https://watchers.news/2019/12/25/china-unveils-digital-courts-with-ai-judges-and-verdicts-via-apps/ (see video of AI judge in action).

8 Paul, *supra* note 5.

9 Stephen Hoffman, *AI Judges: Can A Good Judge Be Artificially Intelligent?*, LAW OFFICE OF STEPHEN L. HOFFMAN LLC (April 11, 2019), https://www.hofflawyer.com/general/2019/04/11/ai-judges/.

10 *Id.*

11 Bernard Marr, *What Is the Difference Between Weak (Narrow) and Strong (General) Artificial Intelligence (AI)?,* BERNARD MARR & CO., https://bernardmarr.com/default.asp?contentID=2194 (last visited June 27, 2021) [hereinafter Marr *Weak-Strong* Post].

12 Bernard Marr, *What is Weak (Narrow) AI? Here Are 8 Practical Examples*, BERNARD MARR & CO., https://bernardmarr.com/default.asp?contentID=2198 (last visited June 27, 2021) [hereinafter Marr *Weak* Post]; Andrew Davies, *Artificial Intelligence and the Legal Industry*, LEGALFUTURES (May 2, 2019), https://www.legalfutures.co.uk/blog/artificial-intelligence-and-the-legal-industry.

13 Marr *Weak* Post, *supra* note 12.

14 *See, e.g.,* Lauri Donahue, *A Primer on Using Artificial Intelligence in the Legal Profession*, HARV. J. OF L. & TECH. (2018), https://jolt.law.harvard.edu/digest/a-primer-on-using-artificial-intelligence-in-the-legal-profession.

be duped or confounded by situations they haven't seen before. A self-driving car gets flummoxed by a scenario that a human driver could handle easily."[15] These types of tasks are child's play for a human, but not the current weak AIs. In contrast, strong AI, or "general AI," thinks like a human and sets out to perform any task it envisions.[16] True strong AI doesn't exist yet.[17]

The China Internet Court and the planned Estonia Small Claims AI Judge have two things in common that allow their weak AI to operate: they focus on a narrow slice of cases and the facts and issues are straightforward and repeated. Together, these characteristics continually yield additional relevant data for the AI Judge to learn from for each new case brought before it. This is the kind of "big data" AI needs to operate and learn. And because the AIs that decide the cases—and the cases themselves—are not that complex, it also means "explainability"—"machine learning techniques that make it possible for the human users to understand, appropriately trust, and effectively manage AI"[18]—and therefore trust the AI judge, is likely possible.

In contrast, explainability in a complex civil case is far more challenging. The AI Judge there must make many more and more complex decisions than China's Internet Court AI Judge that affect the outcome of a case. For example, the AI Judge would need to assess witness credibility. In theory, thousands of videos of people telling the truth and being deceptive could hone the AI Judge's deception detection skills. The University of Maryland's Deception Analysis and Reasoning Engine ("DARE") AI is being used just that way: to "autonomously detect deception in courtroom trial videos" by looking for "micro-expressions" and "vocal patterns"

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[15] Brian Bergstein, *What AI Still Can't Do*, MIT Technology Review (2020), https://www.technologyreview.com/2020/02/19/868178/what-ai-still-cant-do/.

[16] Marr *Weak-Strong* Post, *supra* note 11; Brian Haney, *The Perils and Promises of Artificial General Intelligence*, 45 Notre Dame J. Legis. 150, 152 (2018), https://scholarship.law.nd.edu/jleg/vol45/iss2/1/.

[17] Marr *Weak-Strong* Post, *supra* note 11; Davies, *supra* note 12; *A LawTech Glossary*, Radiant L. Blog, https://radiantlaw.com/blog/a-lawtech-glossary (last visited June 27, 2021) ("'General' artificial intelligence refers to thinking computers, a concept that for the foreseeable future exists only in science fiction and lawtech talks. 'Narrow' artificial intelligence refers to a limited capability (albeit one that may be very useful) such as classifying text or pictures, or expert systems. Discussions of AI that blur general and narrow AI are a good indication that you are dealing with bullshit.").

[18] Jessica Newman, *Explainability Won't Save AI*, Brookings (May 19, 2021), https://www.brookings.edu/techstream/explainability-wont-save-ai/ (citing Kevin Casey, *What is Explainable AI?*, The Enterprisers Project (May 22, 2019), https://enterprisersproject.com/article/2019/5/what-explainable-ai).

that indicate "truthfulness or deception."[19] But how would a DARE-based AI Judge explain its witness credibility assessments to the parties in a way that they can understand? Referencing micro-expressions and vocal patterns is too complex. Maybe the AI Judge could use a system like the Theranos trial jurors—assign a credibility rating to each witness.[20]

The point is explainability is key for litigants to accept an AI Judge's decision. Who would trust an AI Judge that simply pronounces: "I find for the plaintiff on its breach of contract claim. I find for the defendant on plaintiff's fraud claim"?[21] It's "not a matter of calling balls and strikes. Laws are made by humans, they affect humans and their application is unavoidably a human endeavor."[22]

The need for "explainability" results from AI's "black box problem"—its inability to explain how it arrives at its decision. The black box problem arises because we can know the inputs that go into an AI algorithm and the output that it spits out, but we quite often don't know what happens in between—inside the algorithm itself.[23] The black box problem also means that AI can be infected with the biases and mistaken assumptions of its human creators or be influenced by datasets that don't reflect a broad and representative data sample.[24] For example, what if the DARE AI's human designers trained it that a particular microexpression shows deception but the human designers were incorrect in their assessment? The DARE AI would reflect that same mistake.

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[19] Dom Galeon, *A New AI that Detects "Deception" May Bring an End to Lying as We Know It*, FUTURISM (Jan. 9, 2018), https://futurism.com/new-ai-detects-deception-bring-end-lying-know-it; *see also* Zhe Wu et al., *Deception Detection Videos*, ARXIV (Dec. 12, 2017), https://arxiv.org/pdf/1712.04415.pdf; *see also BORDERS' Avatar on Duty in Bucharest Airport*, UNIV. OF ARIZ. (Dec. 13, 2013), https://eller.arizona.edu/news/2013/12/borders-avatar-duty-bucharest-airport (discussing the AVATAR deception detecting AI used at border crossings).

[20] Sara Randazzo and Meghan Bobrowsky, *Jury in Elizabeth Holmes Trial Seized on Two 'Smoking Guns' to Convict Theranos Founder, Juror Says*, THE WALL STREET JOURNAL (Jan. 6, 2022), https://www.wsj.com/articles/jury-in-elizabeth-holmes-trial-seized-on-two-smoking-guns-to-convict-theranos-founder-juror-says-11641503502.

[21] Ironically, we allow human arbitrators to do this when issuing standard awards versus reasoned awards.

[22] Sean Braswell, *All Rise for Chief Justice Robot!*, OZY (June 6, 2015), https://www.ozy.com/the-new-and-the-next/all-rise-for-chief-justice-robot/41131/.

[23] Newman, *supra* note 18.

[24] *Id.* (citing as an example, JOY BUOLAMWINI & TIMNIT GEBRU, GENDER SHADES: INTERSECTIONAL ACCURACY DISPARITIES IN COMMERCIAL GENDER CLASSIFICATION (2018), http://proceedings.mlr.press/v81/buolamwini18a/buolamwini18a.pdf).

"Explainable AI" targets the black box problem. But "explainability" is different for different audiences. To AI developers, it helps debug systems. To AI users, it makes the system understandable. [25] The latter is more difficult. It requires "understanding the context of an explanation, communicating uncertainty associated with model predictions, and enabling user interaction with the explanation."[26] And while explainability may highlight a problem in an AI model's "reasoning," it won't mitigate it. *Humans* must still implement such changes. Thus, "[e]xplainability will only result in trust alongside testing, evaluation, and accountability measures that go the extra step to not only uncover, but also mitigate exposed problems."[27]

In the context of civil litigation, to make the AI Judge's decision understandable to the litigants would likely require the AI Judge to announce its findings of fact and conclusions of law. Weak AI just can't do this. Certainly, many AIs augment the civil litigation process—including AIs that assist with investigation,[28] case assessment[29] and discovery,[30] legal research,[31] responsive pleadings,[32] and motions.[33] Perhaps capabilities of these AIs and the DARE deception detecting AI could be integrated to output a list of findings of fact and conclusions of law from inputs of pleadings, briefing, exhibits, testimony, statutes, rules, and case law and the AI Judge's intermediate rulings on motions and objections. Litigants might still not consider that sufficient. They might require the AI Judge to explain *how* it determined the facts and legal conclusions—even though human judges are not required to explain their decisions at this granular level. That level of "explainability" would allow humans to judge how well the AI Judge approximates its human counterpart. That level of explainability must wait for strong AI. Until then, the Internet Court AI Judge sits alone on its bench.

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[25] *Id.* (citing UMANG BHATT, ET. AL., EXPLAINABLE MACHINE LEARNING IN DEPLOYMENT (Jan. 27, 2020), https://dl.acm.org/doi/pdf/10.1145/3351095.3375624).

[26] Newman, *supra* note 18.

[27] *Id.*

[28] *See, e.g.,* TrialDrone and Intraspexion.

[29] *See, e.g.,* Solomonic, Gavelytics, LexMachina.

[30] *See, e.g.,* Casepoint CaseAssist, Luminance, Reveal NexLP, Everlaw, Disco.

[31] *See, e.g.,* Casetext Parallel Search, Westlaw Edge, LexisNexis.

[32] *See, e.g.,* LegalMation, Casetext Compose, Casemine.

[33] *See, e.g.,* LegalMation.

About the Author

Amy Falcon (J.D. South Texas College of Law 2008; LL.M. Litigation Management, Baylor College of Law 2022) is an unabashed technology and legal nerd. A first career in technology combined with her second career in law causes her frequently to ponder the influence of rapidly advancing technology on the practice of law and lawyers. Amy views litigation as a repeated set of common activities that, much like technology projects, can benefit from project management processes and tools. As a partner in the Litigation Section of Porter Hedges LLP, Amy looks for ways to leverage technology to help her manage cases and deliver value to her commercial litigation clients.