EPSTEIN BECKER GREEN

EBG advisors

Algorithmic Bias Auditing and Risk Management Consulting Services

THE RISKS

We've all heard troubling stories involving emerging tools powered by artificial intelligence (AI) in which algorithms yield unintended, biased, or erroneous results. Here are a few examples:

- A selection app that prefers one gender over another or is not accessible to all
- A selection app that prefers certain backgrounds, education, or experience, with no showing of job relatedness or business necessity
- Facial recognition software that struggles with different skin tones
- An employment screening tool that doesn't account for accents
- A clinical decision support tool for evaluating kidney disease that gives doctors inconsistent advice based on the patient's race
- Triage software that prioritizes one race over others

The list is long and growing, and companies that use these tools do so at increasing legal, operational, and public relations risk.

AI-powered tools, unchecked, pose real but hidden risks to our friends, neighbors, and countless others, often limiting economic opportunities or, in the extreme, causing physical harm. For organizations seeking to use these tools, they also create potentially expensive and disruptive legal liability, operational shortcomings that may impede greater success in the marketplace, and reputational damage in the court of public opinion. Currently, the impact of algorithms on organizations and target populations is poorly understood and rarely measured.

THE LEGAL LANDSCAPE

Local, state, and federal agencies are racing to implement regulations to address these issues with a common thread of identifying and mitigating bias. The U.S. Department of Health and Human Services (HHS) may soon require those using algorithms in health care to evaluate them for bias.[1] New York City requires certain AI-powered selection tools used at any stage of the employment life cycle, from recruitment to termination, to be audited for bias, and several municipalities are currently considering similar regulations. Most recently, the U.S. Equal Employment Opportunity Commission, the Consumer Financial Protection Bureau, the U.S. Department of Justice's Civil Rights Division, and the Federal Trade Commission (FTC) issued a "Joint Statement on Enforcement Efforts Against Discrimination and Bias in Automated Systems," resolving to vigorously enforce their collective existing legal authorities and to monitor the development and use of automated systems. In the European Union, big tech companies will have to conduct annual audits of their AI systems beginning in 2024, and the upcoming AI Act will require audits of "high-risk" AI systems.[2]

1 https://jamanetwork.com/journals/jama/fullarticle/2800369.
2 https://www.technologyreview.com/2022/10/24/1062071/do-ai-systems-need-to-come-with-safety-warnings/.

THE CHALLENGE

Complex problems require nuanced and effective solutions.

Many companies rely solely on data scientists to find and fix problems in their AI tools. While data scientists are focused on making sure that the AI tool works from a technical perspective, they often lack the training and expertise to ensure compliance with the multitude of complex local, state, and federal anti-discrimination laws and regulations and other regulatory requirements that may apply to their algorithm.

The statistical test for determining whether an algorithm has a discriminatory effect is anything but clear. There is also an accelerating push at both the federal and state/local level to adopt new laws aimed at automated decision-making. In short, the legal landscape is rapidly changing and often inconsistent. As diversity, equity, and inclusion initiatives within industries and government oversight and regulation evolve, we cannot expect data scientists to have the breadth of knowledge necessary to ensure that an algorithmic design meets these complex and ever-changing requirements. Even a focus on the ethical use of AI or a deep understanding of the societal nature of discrimination does not assure legal compliance.

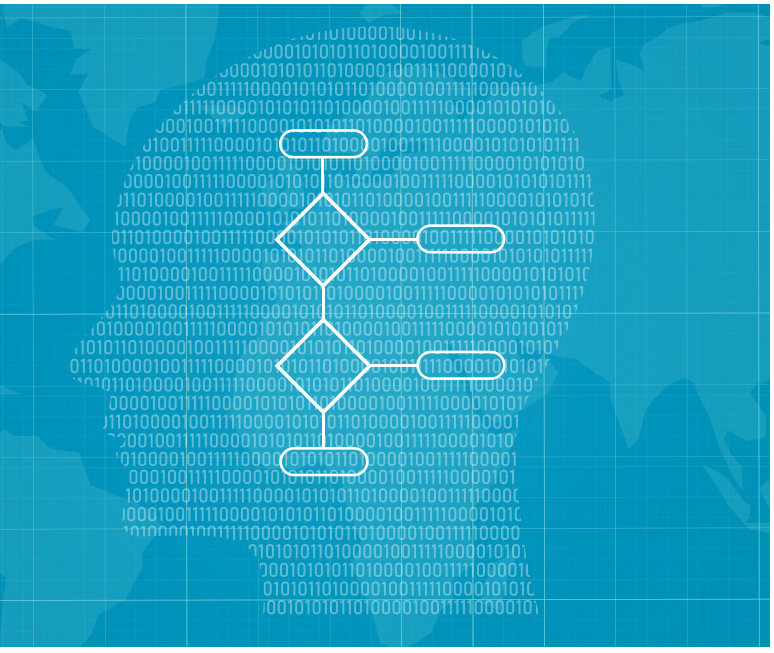
Instead, attorneys, social scientists, and data scientists must partner together to identify whether bias or discrimination may exist, develop appropriate alternatives when they do, and implement best practices going forward while ensuring the utility of the AI tool.

OUR APPROACH: ENHANCED AND FOCUSED AI EVALUATION

We can help you augment and strengthen your AI evaluation framework to protect your organization from a growing number of external threats. We offer both developer and user algorithm bias testing services, as well as a full range of legal and consulting services to help mitigate bias while preserving utility. Proper risk management of bias requires proactive measures throughout the machine-learning model's life cycle, including independent testing for the presence of bias before final deployment and periodic checks after to assure consistent compliance during use.

To measure the potential biases systematically and carefully, we apply an evidence-based evaluation framework that relies upon the Artificial Intelligence Risk Management Framework developed by the National Institute for Standards and Technology (NIST) and its more specific guidance in assessing bias. In those materials, NIST highlights that the bias issue is a socio-technical challenge that requires a multidisciplinary approach to solve. We fully embrace that view as our team comprises three distinct but integrated pillars:

- ***Social scientists*** who study the root causes of algorithmic discrimination as the starting point for investigation
- ***Data scientists*** well versed in the technical challenges of machine learning and designing systems for transparency and effectiveness
- ***Attorneys*** who can discern whether the output of an algorithm complies with applicable legal and regulatory standards while maintaining functionality and maximizing potential privilege assertions



Our experts and attorneys partner for the robust evaluation of algorithms and the process by which they are built and offer constructive and tailored input for mitigating a client's risks and having a useful tool.

Domains Assessed

We provide the full range of applications across the following:

- ***Human resource decision-making***, including recruitment, selection, hiring, promotion, assignment, surveillance, and performance
- ***Health care***, including reimbursement claims administration, clinical decision support, and other clinical or medical applications while addressing health care equity issues
- ***The life sciences*** value chain, from R&D and clinical trial phases through post-marketing/commercialization
- ***Biometric access and identification***

Legal Requirements Assessed

We assess compliance with laws and regulations, such as:

- Title VII of the Civil Rights Act of 1964
- The Americans with Disabilities Act
- The Age Discrimination in Employment Act
- The Uniform Guidelines on Employee Selection Procedures
- State and city fair employment practice laws
- Workplace AI statutes
- The Federal Food, Drug, and Cosmetic Act
- The False Claims Act
- The HHS Nondiscrimination in Health Programs and Activities Proposed Rule – Section 1557 of the Affordable Care Act
- The Federal Trade Commission Act, the Fair Credit Reporting Act, and the Equal Credit Opportunity Act, all administered by the FTC
- State common laws governing product liability, negligence, defamation, and other torts

Technology Assessed

We assess AI, including machine-learning models that use as inputs structured data, natural language, images, or signals, as well as dashboards that make use of tools such as Microsoft PowerBI, R Studio, Tableau, and Qlik.

EBG ADVISORS

We are an interdisciplinary team of attorneys, social scientists, and data scientists. Testing machine-learning models for potential bias and effectiveness requires deep knowledge of the applicable federal and state legal requirements, as well as the technical skills to put your machine-learning model through its paces. Our team works closely together to select the right fairness metric to satisfy a particular legal requirement and then interprets the test results in light of applicable legal or regulatory obligations or policies.

At the forefront of joining data science with law, EBG Advisors includes data scientists with expertise in building models across sectors, assessing for bias, and training on the responsible use of data science and in the validation of processes, feature selection and engineering, model selection, and model results in close collaboration with Epstein Becker Green attorneys.

EBG Advisors also includes social scientists who study the nature of discrimination and its origins. This group brings to the table a sensitivity for where unintended discrimination and bias might arise so that we can proactively assess if it may exist and remediate it if it does.

These scientists collaborate with Epstein Becker Green's attorneys with extensive counseling and litigation experience in labor and employment law and health law. Epstein Becker Green is routinely ranked nationally in Tier 1 in both of those legal practices, including our litigation practice that supports them (in Employee Benefits (ERISA) Law, Employment Law – Management, Health Care Law, Labor Law – Management, and Litigation – Labor & Employment), by *U.S. News – Best Lawyers* "Best Law Firms."

More Information

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Having earned his Master of Applied Data Science in 2022 from the University of Michigan, where he received his law degree more than 35 years earlier, Brad stays up to date on the latest tools and metrics for assessing bias in machine-learning models.

AI in Health Care - Additional Resources