# ALGORITHMS, ARTIFICIAL INTELLIGENCE, AND AUTOMATED DECISIONMAKING

## Overview

In recent years, governments have increasingly sought to regulate the technological systematic collection of citizens' personal information and, even more recently, the use of artificial intelligence (AI) and algorithms.[1] The first government body to focus on regulating privacy concerns was the European Union (EU). The General Data Protection Regulation (GDPR)[2] was introduced in 2016 and included measures regulating AI.[3] Adopted on April 2016 and implemented in May 2018, this regulation became the model for laws around the world, including the California Consumer Privacy Act (CCPA) that was adopted in June 2018. In 2022, the EU proposed the AI Act, the first AI law that could be passed by a major regulator. This proposal separates AI algorithms into three risk areas: risk of unacceptable menace, which would be prohibited; risk that is high but would be allowable with strict constraints; and risk that is low and would be allowed with perceptible limits.[4] This act could provide a template for AI regulation in the same way that the GDPR paved the way for data protection in the U.S.

While federal activity directly regulating the use of the technology has been limited, local and state governments have taken some steps to address algorithmic transparency, particularly in the areas of employment and hiring. Instead, the federal government has generally focused on preventing so-called "algorithmic discrimination" already prohibited by existing laws. Several cities in recent years have also instituted bans on the use of facial recognition technology.[5]

## Use by Financial Institutions

AI and algorithms are transforming industries, including financial services, and are already being used within the industry to improve operations and benefit consumers. As the technology developed, AI and machine learning have affected payment systems in many beneficial ways, including with:[6]

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[1] Medium, *History of AI Regulations*, at https://philsiarri.medium.com/a-history-of-ai-regulations-77a25b910138, (April 2023).
[2] EUR-Lex, *General Data Protection Regulation*, at https://eur-lex.europa.eu/eli/reg/2016/679, (2016).
[3] GDPR.EU, *What is the GDPR, the EU's new data protection law?*, at https://gdpr.eu/what-is-gdpr/ (Accessed April 20, 2023).
[4] Ibid.
[5] These cities are Baltimore, Maryland; Berkeley, California and Portland, Oregon.
[6] Barclays, *AI Payments Revolution*, at https://www.barclayscorporate.com/insights/innovation/ai-paymentsrevolution/#aiandkyc, (April 26, 2019).

- Improved and more sophisticated fraud detection;
- Increased accuracy and efficiency of underwriting;
- Higher quality assessment of data collected to better know customers; and
- Automated customer service interactions.

In the credit underwriting process, algorithms can be used to eliminated some of the human error and bias that inherently exists in human interaction. They can make credit decisions more accurate, fair, faster and more affordable by judging applicants on their credit worthiness.[7] Automation can help at all steps of the credit approval process; collecting financial data and other mandatory information from customers, assisting in financial spreading and even making the final decision to approve or deny the loan. An overarching benefit to all this automation is the time saved for credit analysts to focus on other things.[8] Importantly, an algorithm allows for processing of more pieces of information than possible through human interaction, which further limits the impact of any single variable on the final decision.

Fraud detection and prevention is another area where artificial intelligence can greatly improve over human performance. Detecting fraudulent patterns typically consists of processing large multi-country data sets, as fraudsters will use similar methods from one country to another and then attempt to take them globally. Artificial intelligence can process this information faster than humans and is able to identify more complex patterns. A machine learning system could analyze more data and react to new suspicious behaviors faster.[9] For example, a payment services provider in Europe found its fraud monitoring and prevention model immediately reduced fraud by 25 percent and could reduce it by an estimated 40 percent as the model continues to learn.[10]

## Current Landscape

### *Federal Landscape*

Since 2018, the **U.S.** Congress has introduced 55 bills pertaining directly or indirectly to artificial intelligence algorithms, with several enacted. The most important of these was the 2021 National Defense Authorization Act (HR 6395/Public Law 116-283), which directed the directed the National Institute of Standards and Technology (NIST) to collaborate with the private and public sectors to develop a voluntary AI risk management framework. Following a series of requests for information and multiple rounds of revisions, NIST released its framework in January 2023.[11]

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[7] AFSA, *District of Columbia B24-0558 Joint Comment Letter*, at https://afsaonline.org/wp-content/uploads/2022/10/Joint-comment-letter-DC-B24-0558-Algorithms-1.pdf (October 6, 2022).
[8] Moody's Analytics, *Maximize Efficiency: How Automation Can Improve Your Loan Origination Process*, at https://www.moodysanalytics.com/articles/2018/maximize-efficiency-how-automation-can-improve-your-loan-origination-process (November 2018).
[9] Deloitte, *Automation is the future of fraud risk management*, at https://www2.deloitte.com/in/en/pages/finance/topics/forensic/automation-is-the-future-of-fraud-risk-management.html (Accessed April 20, 2023).
[10] KPMG, *Fighting Fraud with a Model of Models*, at https://assets.kpmg.com/content/dam/kpmg/dk/pdf/dk-2020/04/Nets-KPMG-Fighting-Fraud-with-a-Model-of-Models-whitepaper-2020.pdf (April, 21, 2020).
[11] National Institute of Standards and Technology, *Artificial Intelligence Risk Management Framework (AI RMF 1.0),* at https://nvlpubs.nist.gov/nistpubs/ai/NIST.AI.100-1.pdf, (January 2023).

Separately, in March 2021, the federal prudential regulators—the Board of Governors of the Federal Reserve, Federal Deposit Insurance Corporation (FDIC), National Credit Union Administration (NCUA), and Office of the Comptroller of the Currency (OCC)—joined by the CFPB, issued a request for information related to how financial institutions use artificial intelligence and machine learning in the provision of services to their customers.[12] No new rulemakings have been proposed as a result of the RFI.

In May 2022, the Department of Justice and the Equal Employment Opportunity Commission (EEOC) voiced concerns about the use of AI algorithms and similar technologies applied during the hiring process, specifically with regard to disparate outcomes for individuals who are disabled, and preventing disparate decisions in the programing of AI and algorithmic systems.[13] This release was part of the EEOC's Artificial Intelligence and Algorithmic Fairness Initiative, which started in 2021. Later that same month, the CFPB issued Circular 2022-03: *Adverse action notification requirements in connection with credit decisions based on complex algorithms*, which makes it clear that a creditor's obligations regarding discrimination and adverse action notices "apply equally to all credit decisions, regardless of the technology used to make them."[14]

Also in 2022, the Biden administration, with the assistance and support of the CFPB, Federal Trade Commission (FTC), and Federal Housing Administration (FHA), issued a "Blueprint for an AI Bill of Rights." The White House's blueprint expresses concern about the ways automated systems and other tools may limit opportunities and access to critical resources or services such as credit decisions by perpetuating existing inequities and biases. The AI Bill of Rights outlines five principles of recommendation followed from a study done by the Office of Science and Technology Policy. These principles describe safe and effective systems, algorithmic discrimination protections, data privacy, notice and explanation and, lastly, human alternatives (consent), consideration (problem solving), and fallback (remedies).

Finally, on April 26, 2023, the CFPB, DOJ Civil Rights Division, EEOC, and FTC issued a joint statement about enforcement efforts "to protect the public from bias in automated systems and artificial intelligence." In a separate press release, the CFPB confirmed its specific priorities related to AI and indicated that it would soon release a white paper discussing the use of chatbots by financial institutions and the ways the CFPB is already seeing chatbots interfere with consumers' ability to interact with financial institutions.

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[12] Federal Register, *Request for Information and Comment on Financial Institutions' Use of Artificial Intelligence, Including Machine Learning*, at https://www.federalregister.gov/documents/2021/03/31/2021-06607/request-for-information-and-comment-on-financial-institutions-use-of-artificial-intelligence, (March 31, 2021).
[13] Equal Employment Opportunity Commission, *U.S. EEOC and U.S. Department of Justice Warn against Disability Discrimination*, at https://www.eeoc.gov/newsroom/us-eeoc-and-us-department-justice-warn-against-disability-discrimination, (May 12, 2022).
[14] CFPB, *Consumer Financial Protection Circular 2022-03*, https://www.consumerfinance.gov/compliance/circulars/circular-2022-03-adverse-action-notification-requirements-in connection-with-credit-decisions-based-on-complex-algorithms/, (May 26, 2022).

*State Landscape*

AI, algorithms and automated decision-making tools were a nascent topic during the 2021-2022 session. During the previous legislative session, the **District of Columbia** Council introduced an omnibus bill B24-0558 that would have affected algorithm use across industries if it had been enacted. Titled the "Stop Discrimination by Algorithm Act of 2021" the bill was introduced on December 9, 2021, accompanied by a letter of support from Democrat Attorney General Karl Racine. The bill was last considered at a hearing held on September 22, 2022. AFSA testified during the September 22 hearing[15] and submitted a joint trade letter[16] for the record expressing numerous concerns with the legislation. The bill died at the end of the legislative session but an identical version with a new title was reintroduced during the current session as B25-0114. It was referred to the Business and Economic Development Committee and the Judiciary and Public Safety Committee on February 7.

This bill would prohibit the use of algorithmic decision making to discriminate in any manner; inadvertently banning many beneficial uses of AI algorithms and other automated decision-making tools through other requirements. The bill would require multiple disclosures to individuals whose personal information was collected and separate notices to individuals subject to any adverse action resulting from an algorithm. This bill would also require extensive auditing and annual reporting to the attorney general. Either the AG's office or a private citizen could enforce violations through a civil right of action.

In addition to the District of Columbia, a handful of states are considering legislation on algorithms. None of the other states' legislation was as far-reaching as the District of Columbia's proposed bill. More bills of this type will likely to be seen in 2023 and beyond as lawmakers at the local and state level take action. Other AI legislation being considered this session includes the following:

**California** AB 331 passed the Assembly Judiciary Committee with amendments on April 19. This bill would create new provisions on "algorithmic discrimination" that would affect multiple industries. The bill's sponsor, Assemblymember Rebecca Bauer-Kahan, specifically mentions that the bill builds on the Biden Administration's AI Bill of Rights framework[17]. It would require businesses using algorithmic tools to perform an impact assessment on the use of these tools by January 1, 2025. The bill would create a private right of action for individuals that suffered actual harm due to algorithmic discrimination. AFSA signed a multitrade letter opposing the bill on April 4.[18]

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[15] American Financial Services Association, *Testimony - DC-B24-0558*, at https://afsaonline.org/?s=Testimony+-+DC-B24-0558, (September 22, 2022).
[16] American Financial Services Association, *Comment Letter - DC-B24-0558*, at https://afsaonline.org/?s=Comment+Letter+-+DC-B24-0558, (October 6, 2022).
[17] Assemblymember Rebecca Bauer-Kahan, *Assemblymember Bauer-Kahan's AB 331 Regulating Automated Decision Tools Passes Committee*, at https://a16.asmdc.org/press-releases/20230411-assemblymember-bauer-kahans-ab-331-regulating-automated-decision-tools, (April 11, 2023)
[18] American Financial Services Association, *California AB 331 Joint Letter re: Automated Decisionmaking,* at https://afsaonline.org/wp-content/uploads/2023/04/Joint-Letter-CA-AB-331-Automated-Decisionmaking.pdf, (April 4, 2023)

**California** SB 313 passed the Senate Governmental Organization Committee as amended on April 11 and is pending in the Senate Judiciary Committee. This bill would be known as the California AI-ware Act. This bill would establish, within the Department of Technology, the Office of Artificial Intelligence and would grant the office the power and authority necessary to guide those who design, develop and deploy automated systems used by state agencies. Coordination with all agencies would ensure that all AI systems are designed and deployed in a manner that is consistent with state and federal laws that would regulate privacy and civil liberties to minimize bias and promote equitable outcomes for all Californians. Notices are required to all citizens that they would be communicating with an AI when contacting state agencies and provide instruction on how to do so.

**California** SCR 17, a joint resolution, was adopted by the Senate on February 17 and is now pending in the House Privacy and Consumer Protection Committee. This measure would affirm the California legislature's commitment to the White House Administration's vision of safe AI algorithm systems and the principles outlined in the "Blueprint for an AI Bill of Rights."

**Georgia** HB 18 was signed by the Republican Governor Brian Kemp on March 10. Conference committee agreements are provided here. Effective immediately, this appropriation bill includes granting $5 million to the Georgia Artificial Intelligence Manufacturing Project Board of Regents Public Service and Special Funding Initiatives Program. This law also includes another $5 million to match the $65 million federal grant for the Georgia Artificial Intelligence Manufacturing Project for Southwest Georgia.

**Hawaii** SR 123 was enacted on March 1. This resolution requests and encourages the United States Congress to initiate a discussion regarding the benefits and risks of using AI algorithms across all industries that could affect the personal, work and social lives of citizens.

**Illinois** HB 1002 passed the House Rules Committee on February 21 and is pending in the House Appropriations Health and Human Services Committee. The bill is effectively dead as it failed to pass the House before the March 31 crossover deadline. It would amend the University of Illinois Hospital Act and the Hospital Licensing Act. This bill would require a medical hospital, before using any diagnostic AI algorithm to diagnose a patient, to first confirm that the diagnostic algorithm has been certified by both the Department of Public Health and the Department of Innovation and Technology. This bill would require that the AI algorithm tool prove to both departments that the AI algorithm has achieved the same or more accurate method of diagnosis results than through a traditional diagnostic means. This bill would also prohibit a hospital from using an AI tool as the only method of diagnosis available to a patient.

**New Jersey** AB 4909 passed the Assembly Labor Committee and is pending in the Assembly Science, Innovation and Technology Committee. A statement from the committee is provided here. This bill would regulate the sale and use of automated employment decision tools (AEDT), an AI algorithm system used by industries for employee hiring. AI systems would be defined by including inferential methodologies, linear regression, neural networks, decision trees, random forests and other learning algorithms. These AI systems would be prohibited to automatically

filter prospective candidates for hire or for any term, condition or privilege of employment in a way that establishes a preferred candidate or candidates.

**New York** SB 553 was introduced by the chairman of the Senate Consumer Protection Committee, Senator Kevin Thomas, D-Baldwin, on January 5 and is pending in the Senate Insurance Committee. This bill would require certain disclosures by automobile insurers relating to the use of telematics systems, an AI algorithm model, to determine insurance rates and/or discounts. Third-party developers or vendors of telematics systems would be required to submit their model or algorithm with the superintendent for review.

**New York** SB 5641 was referred to the Senate Labor Committee on March 10. The bill would create new provisions on the use of an "automated employment decision tool," defined as any system used to assess employment candidates "without relying on candidate-specific assessments by individual decision-makers." The definition would include personality or cognitive tests, resume scoring systems, or other systems that use statistical models, artificial intelligence, or machine learning to judge candidates. The bill would require employers to submit an annual disparate impact analysis on the use of these tools to the Department of Labor. It would also require employers to publish a summary of the annual analysis publicly on their website. The bill would also give the Attorney General or Labor Commissioner authority to investigate suspected violations of employment law based on the employer's disparate impact report. Companion bill AB 567 is pending in the Assembly Labor Committee.

New York City also implemented Local Law 144. This local rule clarifies the audit requirements for the use of automated employment decision tools (AEDT) by employers governing the use of AI as an instrument for the hiring process. Although this local law was to go into effect in 2022, it was delayed until April 15, 2023.[19]

**North Dakota** HB 1361 was signed by the Republican Governor Doug Burgum on April 11. Effective immediately, this measure amends the North Dakota Century Code to update the definition of the term "person" to not include environmental elements, artificial intelligence, an animal or an inanimate object.

**Oregon** SB 625 was heard in the Senate Information Management and Technology Committee on April 19 and is pending committee action. This bill would require Oregon's Department of Administrative Services to establish a pilot program to evaluate the risks and benefits of using challenge-based procurement AI algorithms and to conduct tests on competitive information technology procurement systems. This bill would require contracting agencies that use AI challenge-based procurement methods to provide sufficient information to the department to allow them to evaluate and report results to the governor and to interim committees of the legislative assembly no later than December 31, 2025.

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[19] Eversheds-Sutherland, *New York City Delays Enforcement of its Artificial Intelligence Bias Audit*, at https://us.eversheds-sutherland.com/NewsCommentary/Legal-Alerts/256738/New-York-City-delays-enforcement-of-its-artificial-intelligence-bias-audit-in-employment-law-as-rule-making-continues#:~:text=Local%20Law%20144%20of%202021,bias%20present%20in%20the%20tool, (February 2022).

**South Carolina** SB 404 was introduced to the Senate on January 18 and is pending in the Senate Judiciary Committee. The bill is effectively dead as it failed to pass the Senate before the April 10 deadline. It would prohibit operators of internet-based applications from using "automated decision systems" or AI algorithms to place content on social media platforms for users under the age of 18 who are residents of the state. This bill would require operators to perform age-verification practices for certain users, and it would establish that a violation is an unfair or deceptive act or practice under the South Carolina Unfair Trade Practices Act.

**Conclusion**

The financial services industry uses AI, machine learning, and algorithmic tools to automate the underwriting process, expand fraud detection, and mitigate personal bias, all of which benefit customers. The use of these tools has expanded access to credit and significantly contributed to the financial well-being of those who would otherwise have limited access to financial services and products. However, as artificial intelligence and algorithms continue to gain popularity and understanding in the public consciousness, federal, state and local policymakers will increasingly look at these tools with a critical regulatory eye. Recent bills like **California**'s AB 331 and the **District of Columbia**'s B25-0114 are the most comprehensive attempts to rein in the use of these practices, and other states may likely follow suit in future legislative sessions.

The consumer credit industry condemns bias in all of its forms and remains committed to equality in lending as in all other matters. Policymakers must consider the benefits to consumers and existing state and federal laws and regulations governing the use of these technology tools before enacting new ones, as new AI-specific regulations would likely stifle innovation in an area which shows great promise for increased credit access. AFSA will continue to monitor this issue and advocate for AI's important place in the credit process.