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2023 LAVENDER LAW® CONFERENCE & CAREER FAIR

CLE Materials

Panel Title: Bracing for the Artificial Intelligence
and Machine Learning Revolution

Date of Panel: July 26, 2023

Time of Panel: 2:15-3:15pm CT

Moderator

Kenneth Guerra, Associate, Finnegan LLP, Washington, D.C.

Speakers

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Artificial Intelligence and Machine Learning

Bracing for the Artificial Intelligence and Machine
Learning Revolution

What are AI and ML?

- Artificial Intelligence
 - “Smart” systems
 - Machines that imitate human behavior
- Machine learning
 - A type of AI
 - Typically used to process large amounts of data quickly using algorithms that adapt and change over time

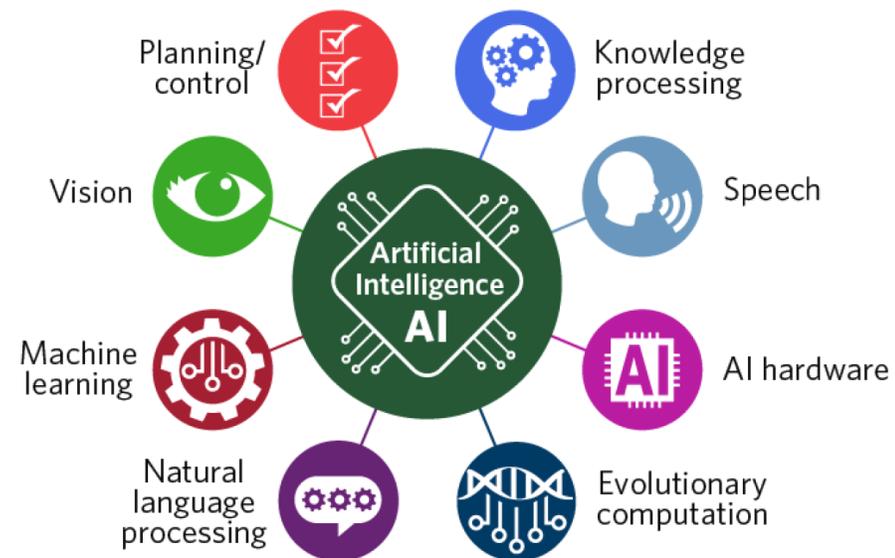
What are AI and ML?

- Defined in the National Defense Act (P.L. 115-232, SEC. 1051. NATIONAL SECURITY COMMISSION ON ARTIFICIAL INTELLIGENCE)
 - (f) **DEFINITION OF ARTIFICIAL INTELLIGENCE.**—In this section, the term “artificial intelligence” includes each of the following:
 - (1) Any artificial system that performs tasks under varying and unpredictable circumstances without significant human oversight, or that can learn from experience and improve performance when exposed to data sets.
 - (2) An artificial system developed in computer software, physical hardware, or other context that solves tasks requiring human-like perception, cognition, planning, learning, communication, or physical action.
 - (3) An artificial system designed to think or act like a human, including cognitive architectures and neural networks.
 - (4) A set of techniques, including machine learning that is designed to approximate a cognitive task.
 - (5) An artificial system designed to act rationally, including an intelligent software agent or embodied robot that achieves goals using perception, planning, reasoning, learning, communicating, decision-making, and acting.

What are AI and ML?

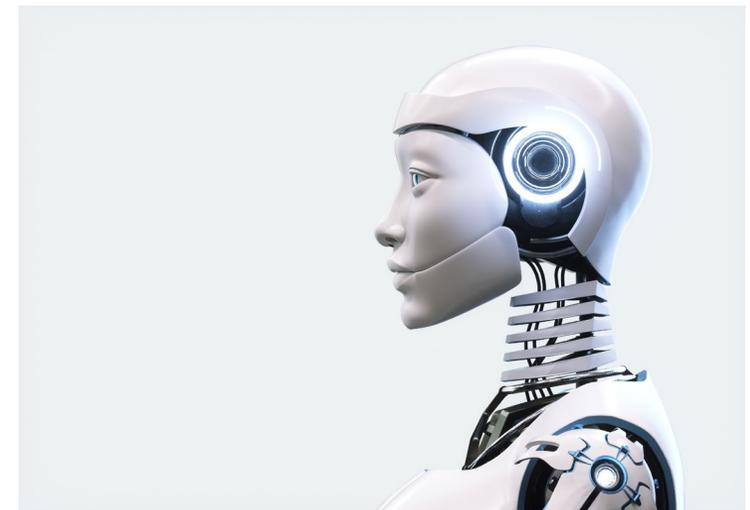
- Study and report by USPTO to understand innovation and AI

Figure 1: AI component technologies



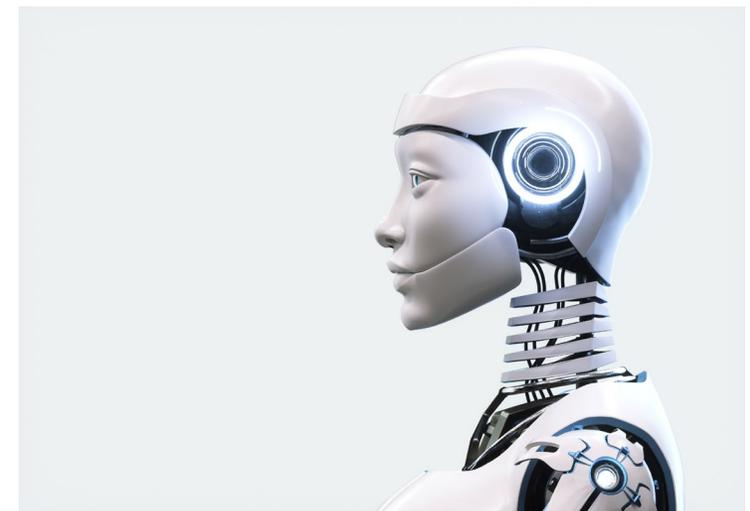
AI and ML in Product Development

- Applicable in nearly every industry from automotive design to drug discovery
- Simulations in R&D
- Generative design to optimize product design from a cost, material, and manufacturing perspective
- Forecasting demand
- Predictive maintenance



AI and ML in Process Optimization

- Quality assurance and defect detection in manufacturing
- Improve customer intake and experience, while leading to more efficient utilization of workflow



Why protect AI and ML?

- Competitive advantage.
- Protecting privacy (think data)
- Innovation

How to protect AI and ML?

- Patents
 - Increasing avenue for protection
 - USPTO 2020 report found that “from 2002 to 2018, annual AI patent applications increased by more than 100%, rising from 30,000 to more than 60,000 annually. Over the same period, the share of all patent applications that contain AI grew from 9% to nearly 16%.”
 - Companies filing patent applications in AI range from fintech sector, to technology companies, to consumer goods, and more.
 - One main hurdle regarding patent protection – Section 101 (Patentability)
 - Alice Corp. v. CLS Bank International, 573 US 208 (2014)
 - Mayo v. Prometheus, 566 US 66 (2012)

How to protect AI and ML?

- Trade secret
 - Available when information is not generally known and can be kept secret as part of your business
 - Advantageous when patenting is not viable (data collection, some algorithms or neural network designs, output of AI systems)
 - Need to have systems and processes in place to ensure trade secret protection
- Copyright
 - “Original works of authorship” (17 U.S. Code § 102), extends to humans not AI
- NDAs

Considerations and Implications of Using AI/ML

- Agreements involving AI/ML
 - Joint development, licenses, supply agreements
- Considerations
 - How to protect innovations developed using AI and ML
 - Who owns the resulting IP and improvements?
 - Who owns the output of the AI?
 - Who owns data collected/analyzed?
 - How does using AI and ML to make judgment calls affect exposure to tort liability?

Privacy Regulations

- Data collection involved in AI and ML can have privacy implications
- In the US –
 - Section 5 of the FTC Act. The FTC Act prohibits unfair or deceptive practices (e.g., racially biased algorithms)
 - Fair Credit Reporting Act. The FCRA can be applicable when an algorithm is used to deny employment, housing, credit, insurance, or other benefits.
 - Equal Credit Opportunity Act. The ECOA makes it illegal for a company to use a biased algorithm that results in credit discrimination on the basis of race, color, religion, national origin, sex, marital status, age, or because a person receives public assistance.
- In the EU – GDPR
- Australian Privacy Act
- Others

AI Principles and Guidelines

- Corporations develop “responsible AI” standards and guidelines (e.g., Microsoft)
- Organizations issue recommendations on AI (e.g., OECD)
- USPTO, FDA, and other regulatory and administrative agencies issue reports on advancement, impact, and protection of AI

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Bibliography or Table of Contents Form

Title of CLE: Bracing for the Artificial Intelligence and Machine Learning Revolution

What is artificial intelligence (AI) and machine learning (ML)

Leveraging AI/ML to develop products

- For example, in the context of medical devices
 - <https://www.fda.gov/medical-devices/software-medical-device-samd/artificial-intelligence-and-machine-learning-aiml-enabled-medical-devices#resources>
 - <https://www.finnegan.com/a/web/3m1ptBrHCouhV7aVhWnfVt/2021-medical-design-and-outsourcing-keys-to-protecting-your-medtech-ai-from-competitors-adm-cs-092021.pdf>
- For example, in the context of drug development
 - <https://deliverypdf.ssrn.com/delivery.php?ID=943123069103073095023097014106124030020017019079008048067085105089126112087092101126048032053025045113109022094122069115085121006035042052016068115115094083127121040008052070078118003098089109030114095020120090103094122003075025023004124112029006007&EXT=pdf&INDEX=TRUE>

Leveraging AI/ML to optimize processes

Now that we know what AI and ML is and how it can take part in the business, how do you advise the business on AI/ML

- How to protect AI and ML?

- Patent
 - *Alice Corp. v. CLS Bank International*, 573 US 208 (2014)
 - *Mayo v. Prometheus*, 566 US 66 (2012)
 - <https://www.finnegan.com/en/firm/news/patents-a-problem-for-ai-but-inventors-still-finding-ways-to-thrive.html>
- Trade secret
- Copyright
 - <https://www.finnegan.com/en/insights/articles/all-change-but-not-just-yet-when-it-comes-to-ai-and-ip.html>
- Considerations for agreements involving AI/ML
 - Types: joint development, licenses, supply, etc
 - Ownership: IP, data, etc.
- Privacy laws and regulations
- <https://www.iso.org/standard/77608.html>
- https://iapp.org/media/pdf/resource_center/ai-and-privacy.pdf

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Key Takeaways Form

Title of CLE: Bracing for the Artificial Intelligence and Machine Learning Revolution

Understanding AI and ML

- Understand how AI and machine learning are already impacting banking, software technology, and pharmaceutical industries, as well as what is on the horizon

Protecting AI and ML and technologies derived therefrom

- Understand competitive advantages of protection
- Understand challenges with IP protections for AI and machine learning algorithms
- Understand challenges with patenting technologies developed using AI and machine learning

Privacy and liability concerns

- Understand licensing and ownership challenges with supplying data for AI and machine learning algorithms
- Understand cybersecurity and data privacy risks and best practices with using personally identifiable information in AI and machine learning algorithms
- Understand liability risks associated with using AI and machine learning algorithms to make business and operational judgment calls
- Adhere to ethical standards for AI and ML efforts