

UNITED STATES PATENT

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Issues of Preparing and Prosecuting AI-Based Applications

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What is Artificial Intelligence?

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AI overview

- No universally recognized definition
 - Generally understood as computer functionality that mimics cognitive functions associated with the human mind (e.g., the ability to reason, generalize, discover meaning, and learn from past experience)
- AI is increasingly becoming an important tool across a diverse spectrum of technologies and businesses
- AI uses
 - Voice-powered personal assistants like Siri and Alexa
 - Autonomous vehicles
 - Forecasting models predicting weather patterns
 - Precision agriculture that detects disease, pests, and poor plant nutrition on farms
 - Fraud detection in banking
 - Cybersecurity



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EPO AI-related publications

Publication

Studies
Patents and the Fourth Industrial Revolution: The global technology trends enabling the data-driven economy
 English

This study explains the trends in a variety of digital technologies like faster wireless internet, smart sensors, "big data" and artificial intelligence. Taken together these are transforming healthcare, transport, agriculture and many more sectors – they account for over 10% of all global innovation.

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Artificial intelligence (AI) is the ability of computers and machines to perform mental tasks commonly associated with humans, such as learning, reasoning and problem solving. Although core AI technologies, including neural networks, deep learning and rule-based systems, have been known for a long time, they have developed dramatically in the past decade, bringing AI to the forefront of our lives. AI is here to stay and promises to be a disruptive force for years to come.

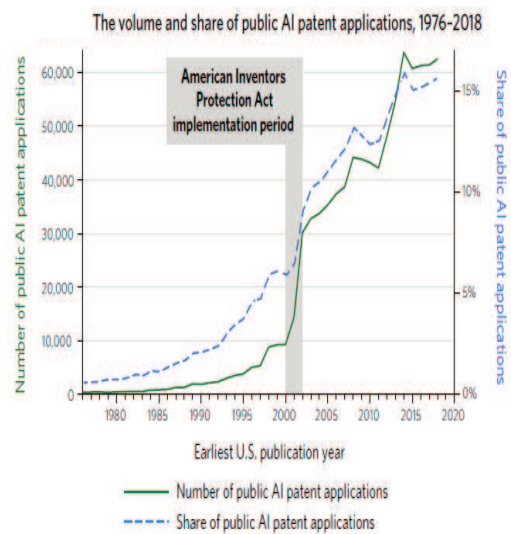
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AI Patenting Trends

USPTO report on diffusion of AI

- Key findings
 - AI is increasingly important for invention, diffusing broadly across technologies, inventor-patentees, organizations, and geography
 - Number of AI patent applications received annually by USPTO more than doubled from 30,000 to 60,000 from 2002 to 2018; share of all patent applications that contain AI grew from 9% to nearly 16%



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